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MOUNTAIN FOOTHILLS

FEBRUARY 1981

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RANGELAND MANAGEMENT PROGRAM

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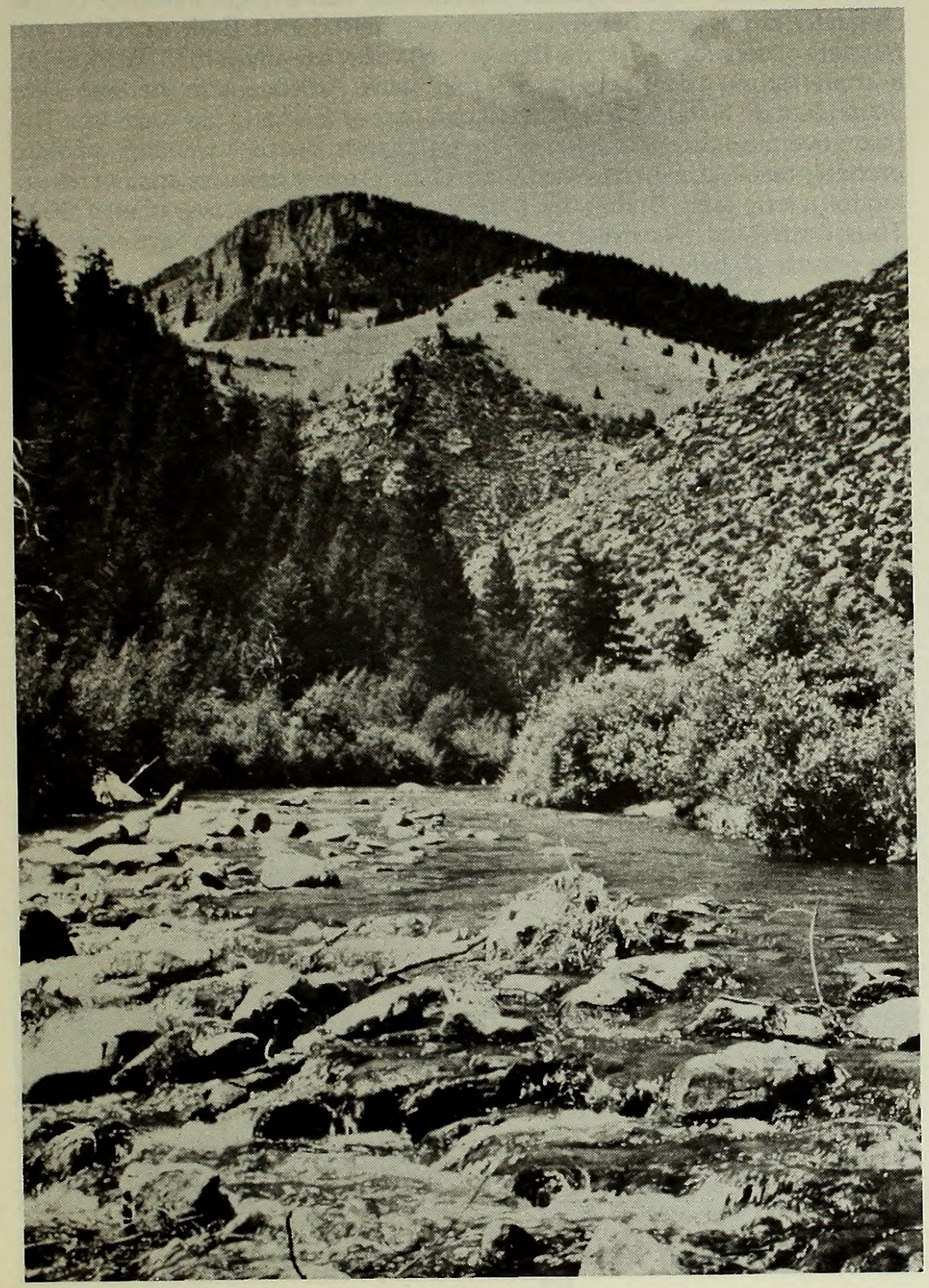
INTRODUCTION

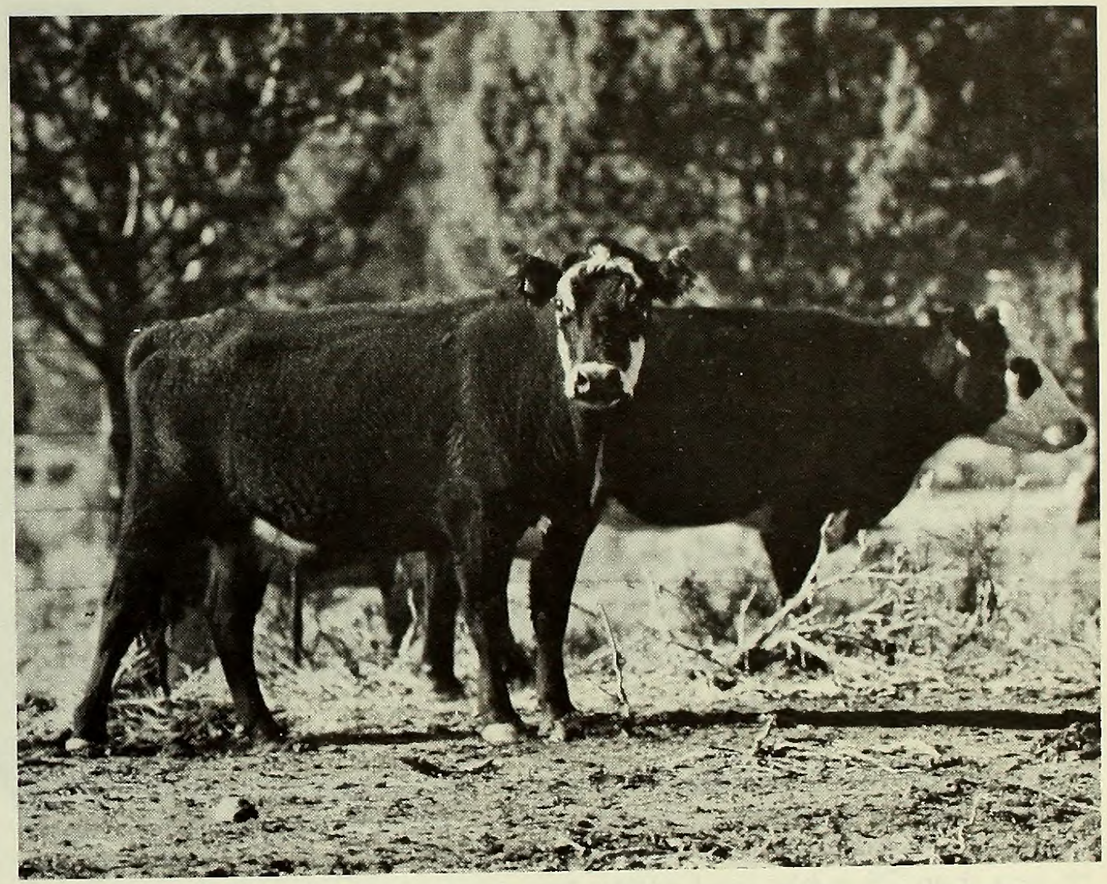


Sheep Creek

PURPOSE

This Mountain Foothills Rangeland Management Program Document (RMPD) summarizes the results of the Bureau of Land Management's land use planning and environmental analysis efforts for the Butte District's Dillon Resource Area in southwestern Montana, and it outlines in general terms the decisions that have been made regarding future management of rangeland resources, including livestock forage, fish and wildlife habitat, watershed values, and other related resources.

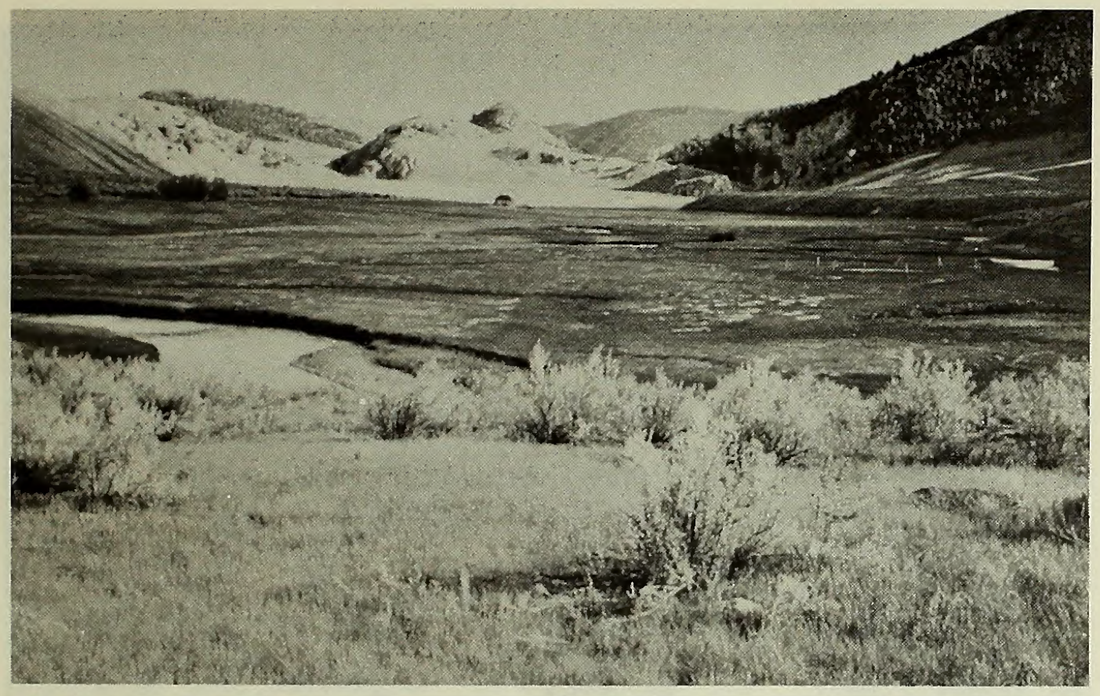
The broad decisions outlined in this document will be followed by the issuance of hundreds of subsequent site-specific decisions affecting individual grazing allotments and livestock operators. Thus, the RMPD may be viewed as a statement of policy for the future management of rangeland and other related resources in the Dillon Resource Area. The RMPD will be revised annually, and it will be republished as a progress report on the Mountain Foothills rangeland management program in 1983 and 1985.



BACKGROUND

The Mountain Foothills EIS study area encompasses approximately 7 million acres and includes all of Beaverhead, Deer Lodge, Madison, and Silver Bow counties in southwestern Montana. About 955,000 acres, or 14 percent of the total, is administered by the BLM. Roughly 911,000 acres is allocated to livestock grazing in 48 operational allotment management plans (AMPs), 137 proposed AMPs, and 281 allotments where no AMPs are proposed. About 41,000 acres now unallotted to grazing will continue in this status, and an additional 3,000 acres will no longer be authorized for livestock use. This further reduction is based on public comments and on the impacts identified in the EIS for the Mountain Foothills grazing management program.

The selected rangeland management program and several of the alternative programs analyzed in the Mountain Foothills EIS addressed significant issues or public concerns identified during the recently completed land use planning effort for the Dillon Resource Area. Examples of the issues and concerns addressed are the need to improve range condition, the need to maintain and improve wildlife habitat, and the need to maintain and improve the economic stability of the area's livestock industry.



Hay Meadow in Sheep Creek Area

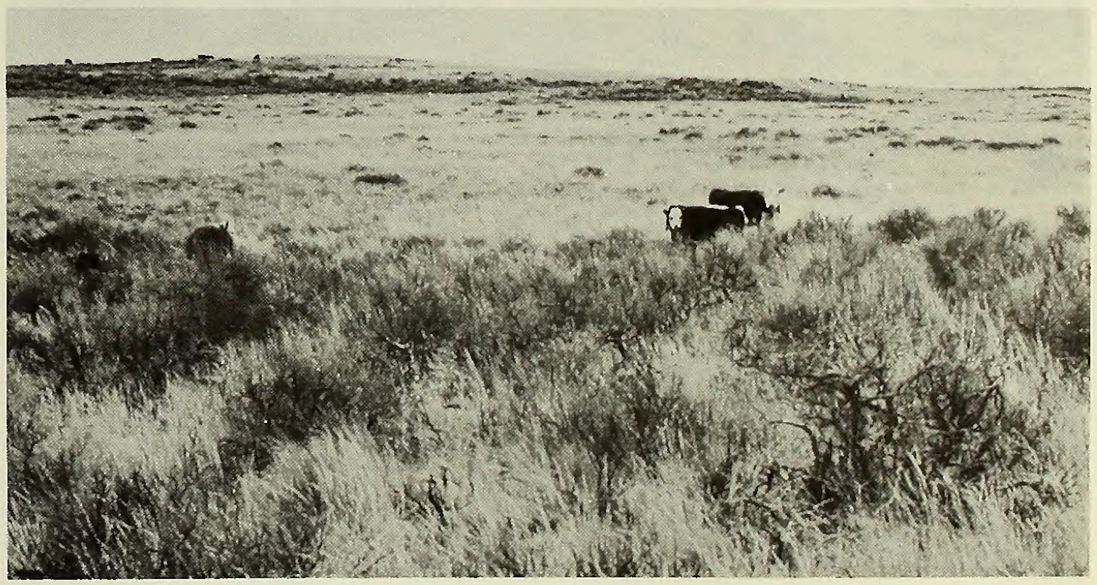
There are 268 ranch operations in the study area that use 125,377 animal unit months (AUMs) annually on the public lands. The dependency of 52 of these operations on public lands is considered relatively insignificant, since they rely on less than 25 public land AUMs. No operation is more than 60 percent dependent on public land forage for its total grazing requirements, although some may be almost entirely dependent during certain seasons of the year.

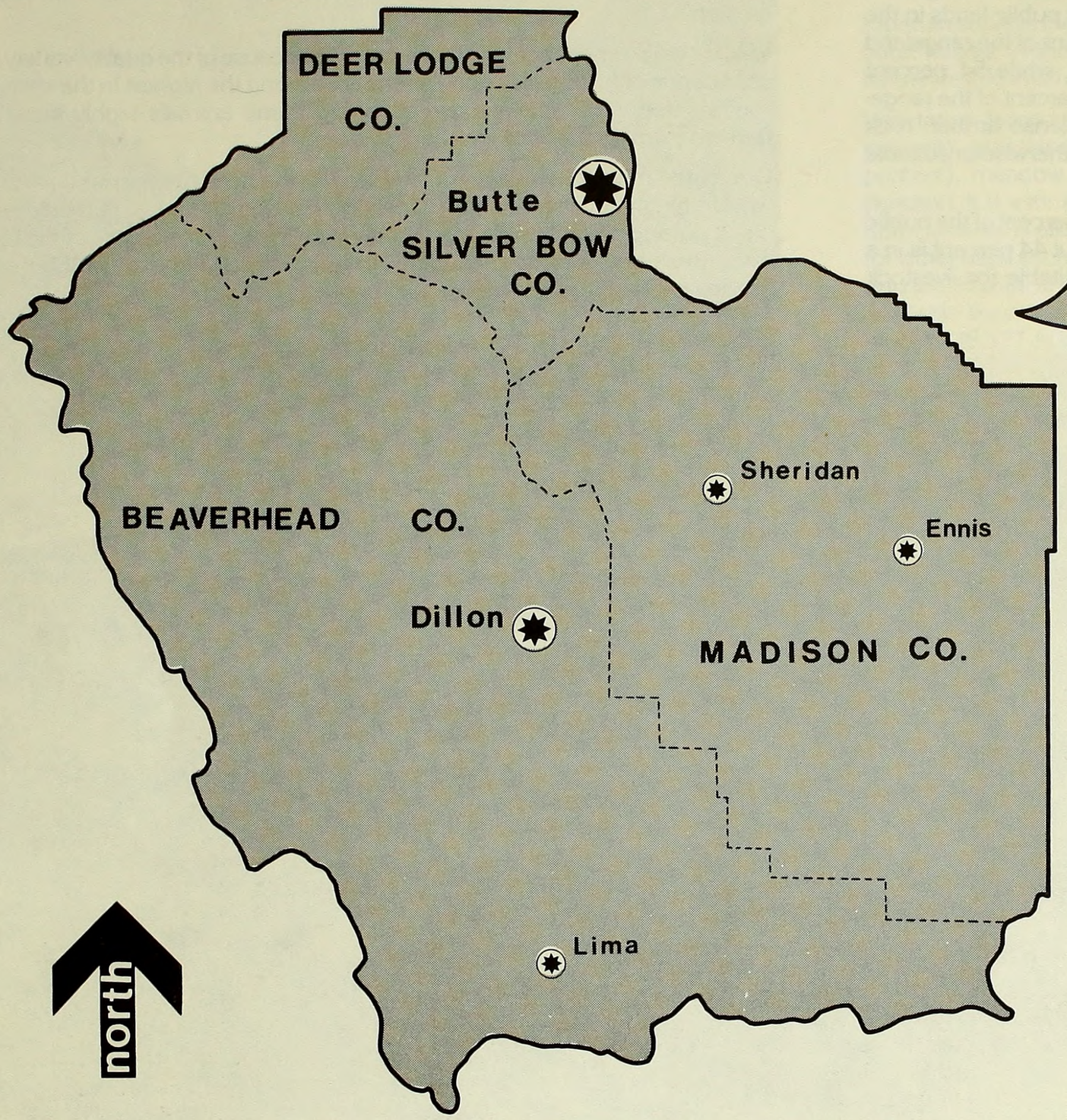
AREA HISTORY

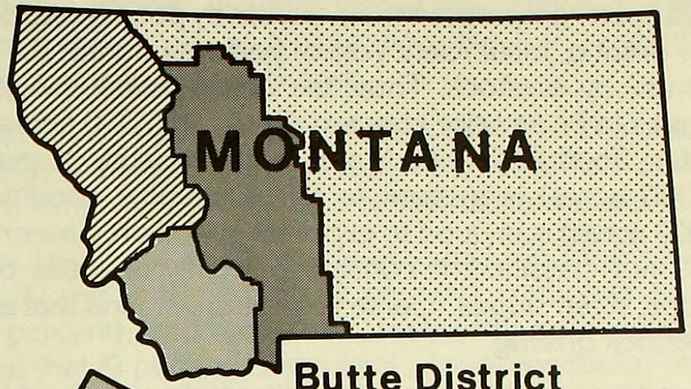
Bison and other large ungulates undoubtedly had a major influence on the character of this area before livestock were introduced. Early explorers and trappers observed bison in the Beaverhead Valley as early as 1833 (Work 1923), and prehistoric evidence suggests that native Americans in the area were dependent on bison for a significant part of their food and raw materials. The bison overgrazed certain areas of the grasslands, but their wandering nature probably resulted in their leaving the area for greener pastures and not returning for a long time. During this time, the range would recover (Curtis 1962). Thus, occasional intensive grazing, followed by rest, seems to have existed on the grasslands before livestock were introduced.

Historical records indicate that the Mountain Foothills EIS study area was first grazed by livestock in 1849 (Brown 1975). With the advent of mining activities during the 1860s, the demand for meat increased dramatically. Accelerated vegetation and soil damage became evident during the 1870s, shortly after the arrival of large livestock herds from Texas and the West Coast. Rangeland productivity continued to decline during the homestead days, when drought, harsh winters, intense competition for forage, and lack of incentive to manage the land prevailed.

During the past few decades, however, progress has been made in bringing about orderly grazing use of the public lands. By the mid-1960s initial information on grazing capacity had been gathered, and livestock grazing allocations in what is now the Mountain Foothills study area were determined according to the provisions of the Taylor Grazing Act. At that time, stockwater facilities and fences were constructed to allow better livestock distribution within designated areas of use.







Butte District

- Dillon Resource Area
- Headwater Resource Area
- Garnet Resource Area

B. L. M.

DILLON RESOURCE AREA

- DISTRICT OFFICE
- RESOURCE AREA OFFICE
- PUBLIC MEETING SITE

Butte D.O.

EXISTING RESOURCE CONDITIONS

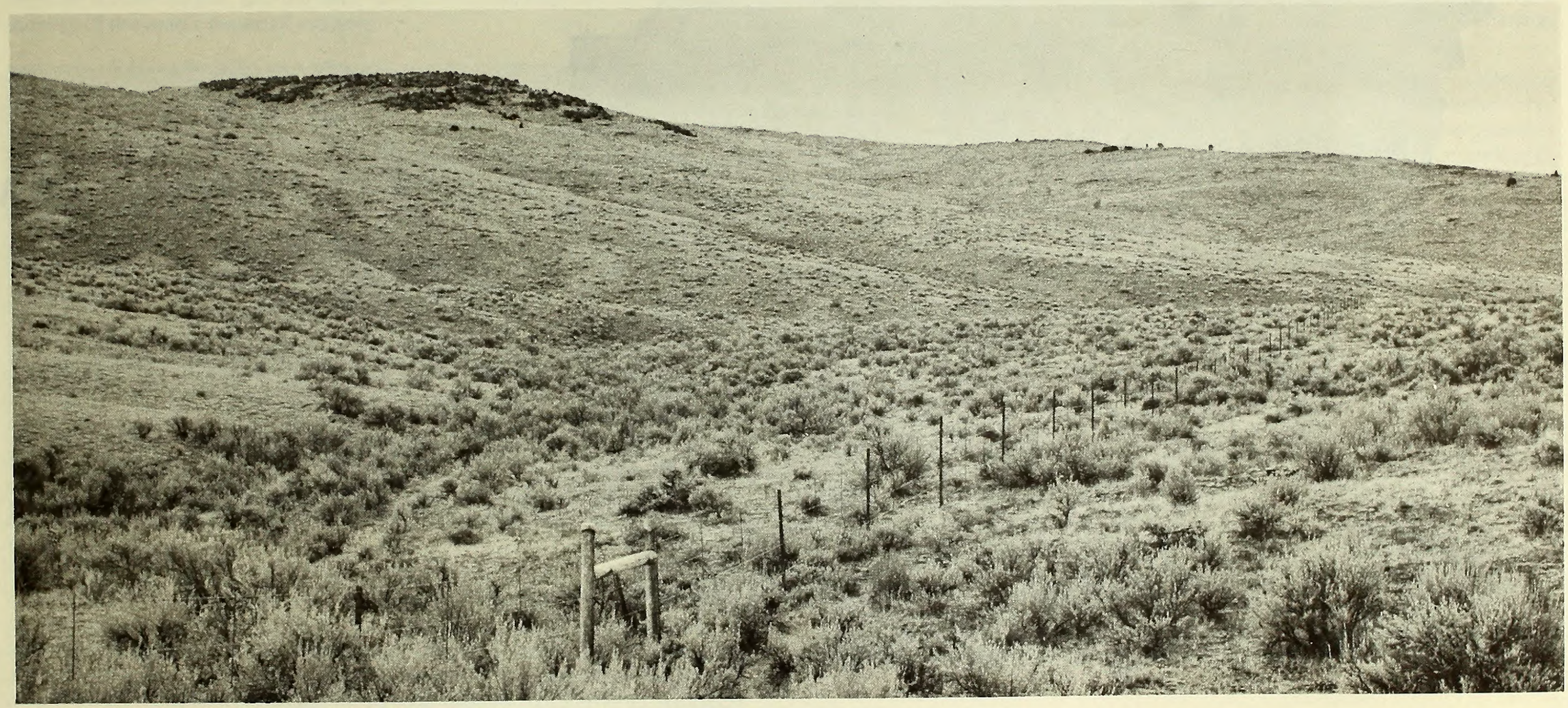
Despite previous adjustments in livestock numbers and the construction of range development projects, continued improvement of the native rangelands has still been hampered in many places by poor livestock distribution, too early spring grazing, insufficient rest of pastures during the growing season, and heavy use by livestock. Thus, the deteriorating condition of the rangeland continues to be a major concern. Of the 955,000 acres of public lands in the Mountain Foothills EIS study area, approximately 30 percent of the rangeland (288,000 acres) is in poor to fair ecological condition, while 54 percent (517,000 acres) is in good to excellent condition. Sixteen percent of the rangeland is not classified; it consists primarily of areas of dense timber, rock outcrops, steep slopes, sparse vegetation, or land that is otherwise unsuitable for livestock grazing.

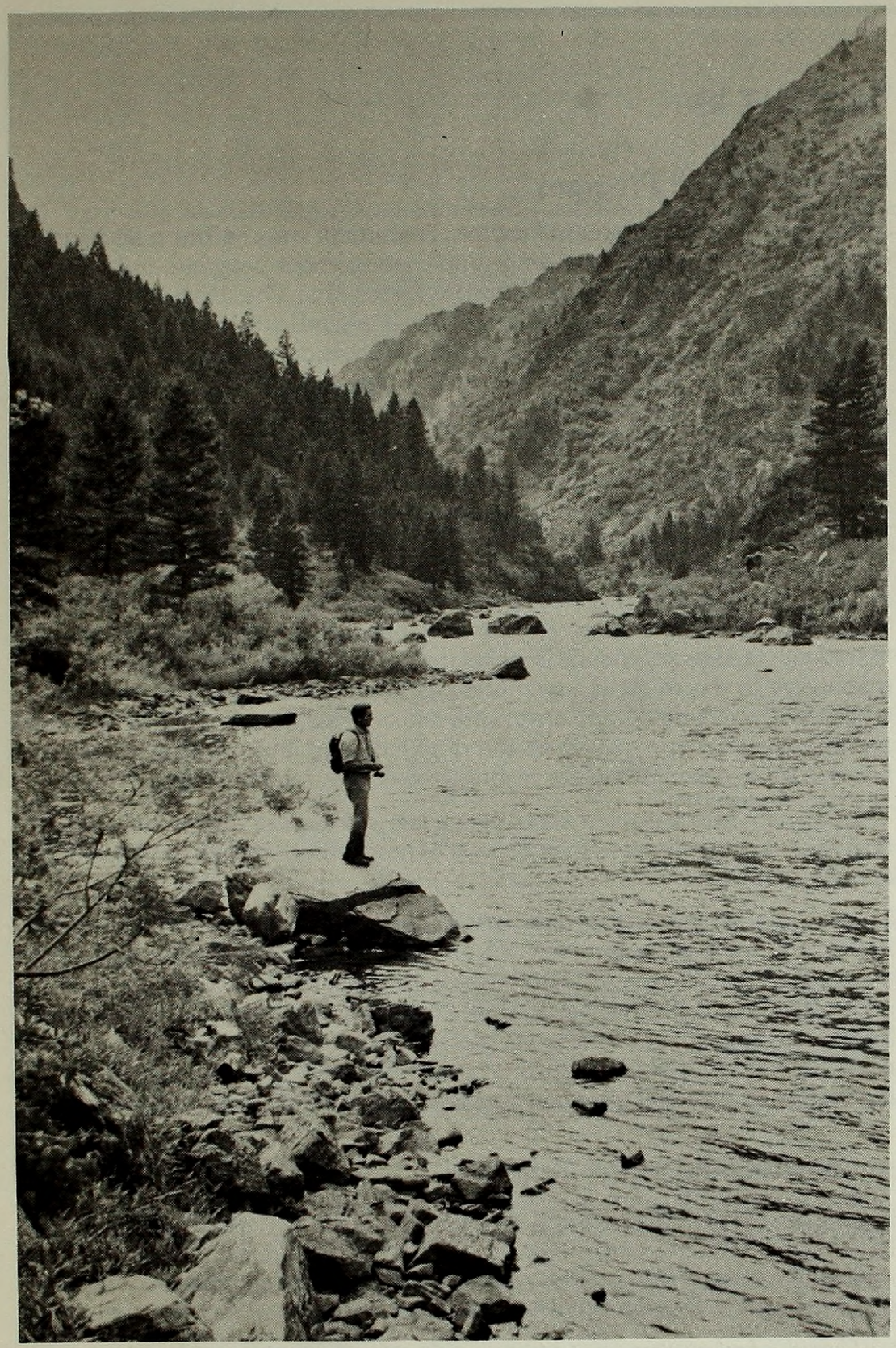
The trend in rangeland condition is improving on about 13 percent of the public lands and declining on 27 percent. Of the remainder, about 44 percent is in a static situation and the condition of the 16 percent unsuitable for livestock grazing is undetermined.

About 15 percent (135,000 acres) of the public land has been classified in critical or severe erosion condition, and there is an apparent downward trend on several thousand acres in moderate erosion condition. Other watershed concerns include some severely eroded stream channels, soil compaction in certain areas, and present livestock management practices that sometimes conflict with the riparian and water quality management objectives, which are to increase ground cover and vegetation density in order to reduce runoff and erosion.

Wildlife is a major concern in the study area because of the quality, variety, and abundance of habitat. Elk populations are among the highest in the state, and moose, deer, and antelope are other big game animals highly sought by hunters from throughout the United States.

One of the more significant wildlife issues is the need to improve or maintain wildlife habitat in the face of competing resource demands, particularly livestock grazing and off-road vehicle use. Protection of the habitats of the threatened grizzly bear and the endangered northern Rocky Mountain wolf, peregrine falcon, and bald eagle is also a major concern.



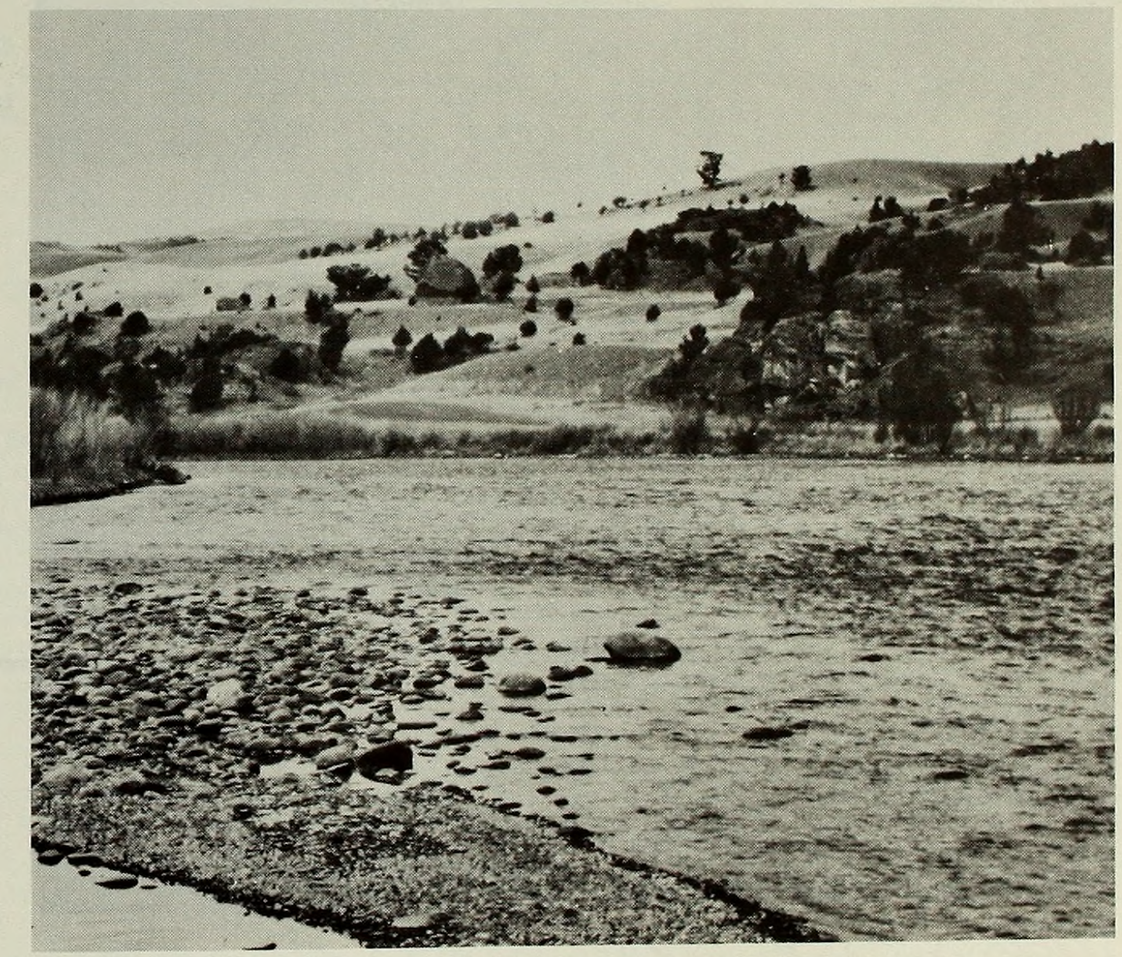


Maidson River, Bear Trap Canyon

Approximately 155 miles of the 450 miles of perennial streams on public lands in the study area afford fishing opportunities. The Madison and Big Hole rivers are nationally known "blue ribbon" fisheries whose headwaters are located here. Because the quality of fishing is so outstanding, about 40 percent of all fishing within Montana occurs in the study area.

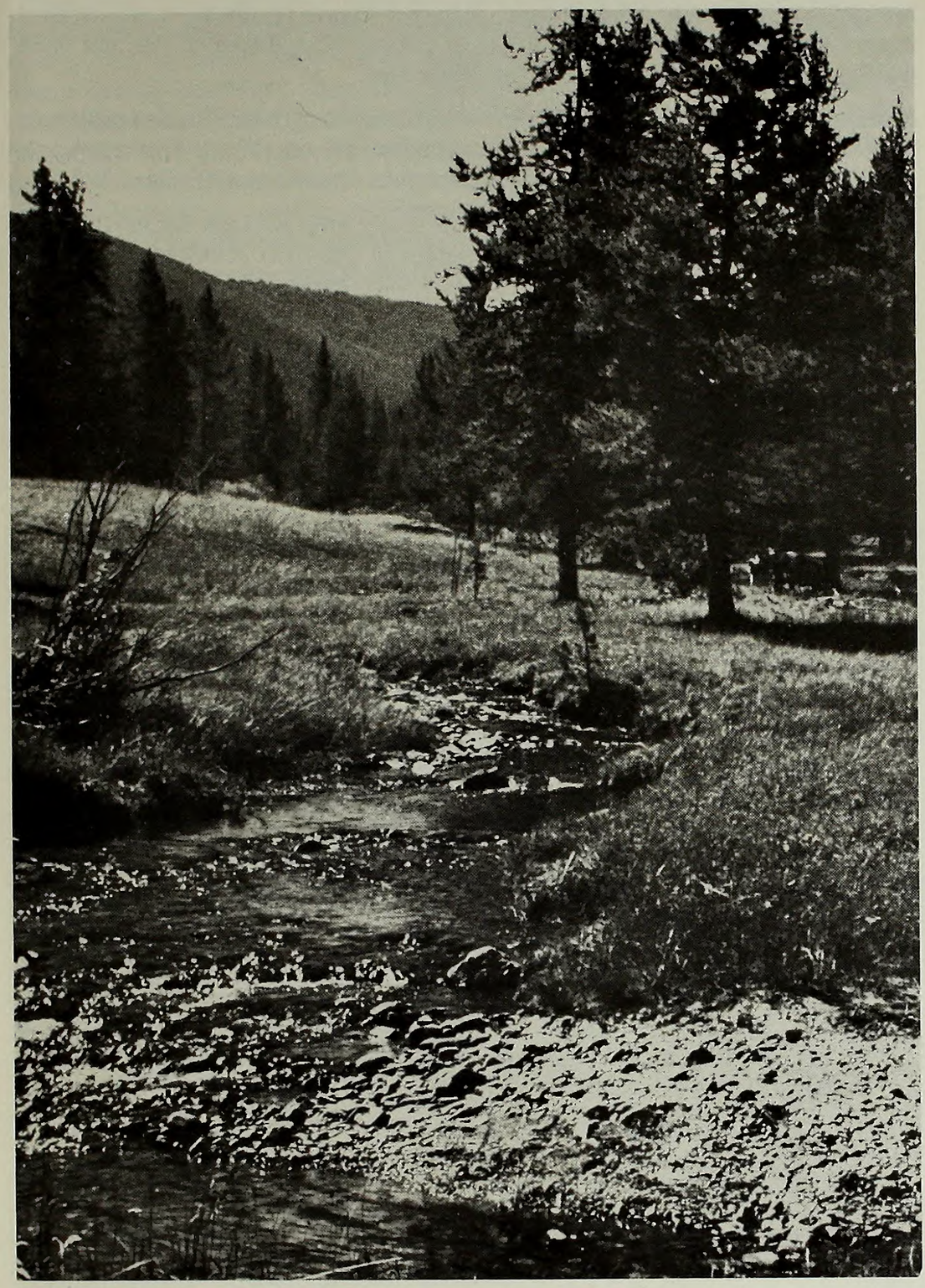
Riparian surveys indicate that 47 percent (211 miles) of the 450 miles of stream bank habitat in the study area is in unsatisfactory condition. This adversely influences downstream fishery production and onsite habitat values.

Vegetation types on public lands in the study area include sagebrush (48 percent), grasslands (30 percent), conifers (11 percent), mountain shrub (2 percent), meadow (1 percent), and lands with essentially no vegetation (6 percent). It is estimated that 19 percent of the total annual vegetation production currently is allocated to livestock, with the remaining 81 percent available for other uses such as wildlife food or cover, watershed protection, aesthetics, and the biological needs of individual plants. However, of the 126,929 AUMs of available livestock forage (i.e., forage that is accessible and palatable to livestock), 125,377 AUMs are currently allocated to livestock.



Upper Madison River

THE PROGRAM



Bear Creek

WHAT IT IS

Elements of the Program

This Rangeland Management Program Document summarizes a decision to implement a more intensive rangeland management program and outlines management guidelines for the Dillon Resource Area. The selected program is essentially the same as the proposed action analyzed in the Mountain Foothills EIS, with modifications based on several concepts contained in the Improved Watershed Values and Wildlife Habitat alternative. The modifications, which are described under "Alternative C," are intended to further mitigate environmental impacts identified in the EIS.

This management program is considered to be the environmentally preferable alternative because it reflects a balance between meeting social and economic demands on the land and protecting and enhancing the natural resources. It was selected because our analysis of the environmental issues and the public responses we received revealed no significant environmental impacts that had not already been considered. Measures identified in the draft EIS will be taken to mitigate the environmental impacts that do occur. The selected program is responsive to the multiple use mandates under which the BLM operates, it takes into consideration the environmental consequences of various actions and the comments received on the draft EIS, and it presents a reasonable balance for accomplishing the resource objectives for the public lands.

The program will be implemented over a five-year period. On the basis of 1980 cost figures, it is estimated that the cost of range development projects will be about $2.4 millon.

The selected program calls for an initial 12 percent reduction from the 125,377 AUMs of current permitted livestock use, to 110,033 AUMs. It is projected that there will be an increase of 37,052 usable livestock AUMs above the proposed initial stocking rate by the year 2010 (see table 1). Twenty-two existing AMPs will be revised, and 137 new AMPs will be established that will include intensively managed grazing systems (seasonal, deferred rotation, rest-rotation, or a combination of several systems) and supporting rangeland developments.

Actions Related to the Program

In order to fully accomplish the multiple use management objectives established in the management framework plan (MFP) for the Dillon Resource Area, it will be necessary to synchronize the rangeland management program with other resource management actions as follows:

1. Existing fences that cause big game entanglement and migration problems will be modified; 356 miles have been identified to date.

TABLE 1

LIVESTOCK FORAGE PRODUCTIVITY AND STOCKING RATES

Management Status	Public Lands Only (AUMs)						
	Number of Allotments	Number of Acres	Range Survey[a]	Current Permitted Use	Initial Stocking	25-Year Projection	Forage Potential
Existing AMPs	26	213,633	26,986	24,434	26,504	33,212	57,575
Revised AMPs	22	138,941	19,259	19,853	17,946	21,417	37,639
Proposed AMPs	137	435,384	63,785	61,664	49,122	75,995	117,470
Subtotal	185	787,958	110,030	105,951	93,572	130,624	212,684
Non-AMPs	281	122,682	16,707	19,155	16,461	16,461[b]	16,707
Unallotted areas	N/A	43,986	192	271	0	0	0
Subtotal	281	166,668	16,899	19,426	16,461	16,461	16,707
Study Area Total	466	954,626	126,929	125,377	110,033	147,085[c]	229,391

SOURCE: BLM, 1980.

a. The number of AUMs of usable livestock forage, as established by range survey, is considered the existing livestock forage productivity.

b. Since no intensive management is proposed on these allotments, it is assumed that the 25-year AUM projection would be the same as the initial stocking level.

c. This figure is available livestock AUMs produced. On the basis of the proposed 86 percent allocation level, 141,897 AUMs would be allocated to livestock.

2. Livestock use will initially be excluded on 26 miles of riparian habitat so that the condition of fisheries and riparian habitat can be maintained or improved.

3. The rangeland management program will be coordinated and/or integrated with the following habitat management plans (HMPs):

a. Axolotl Lakes HMP. The objectives of this plan are to protect Montana's only axolotl (neotenic tiger salamander) population and to maintain trophy fisheries in the lakes. This plan, which was approved in 1976, involves the Axolotl Lakes (0485) and Belle (0672) allotments.

b. Hidden Pasture Bighorn HMP. The objectives of this plan are to reestablish native bighorn sheep and to support a stabilized population of 100 to 125 animals. This plan, which was approved in 1980, must be carefully coordinated with existing AMPs on the Muddy Creek (0039) and Dixon Mountain (0022) allotments. There is a good chance that bighorns will be available for introduction early in 1981.

c. Blacktail Creek HMP. The objectives of this plan, which was approved in 1976, are to optimize the quantity and quality of forage for wintering elk and to improve trout habitat on the East Fork of Blacktail Creek. This important area provides spring and late fall-early winter habitat for most of the elk that winter on the Blacktail Game Range, an administrative unit of the Montana Department of Fish, Wildlife, and Parks. This plan requires close coordination with the Robb Creek (0167) AMP.

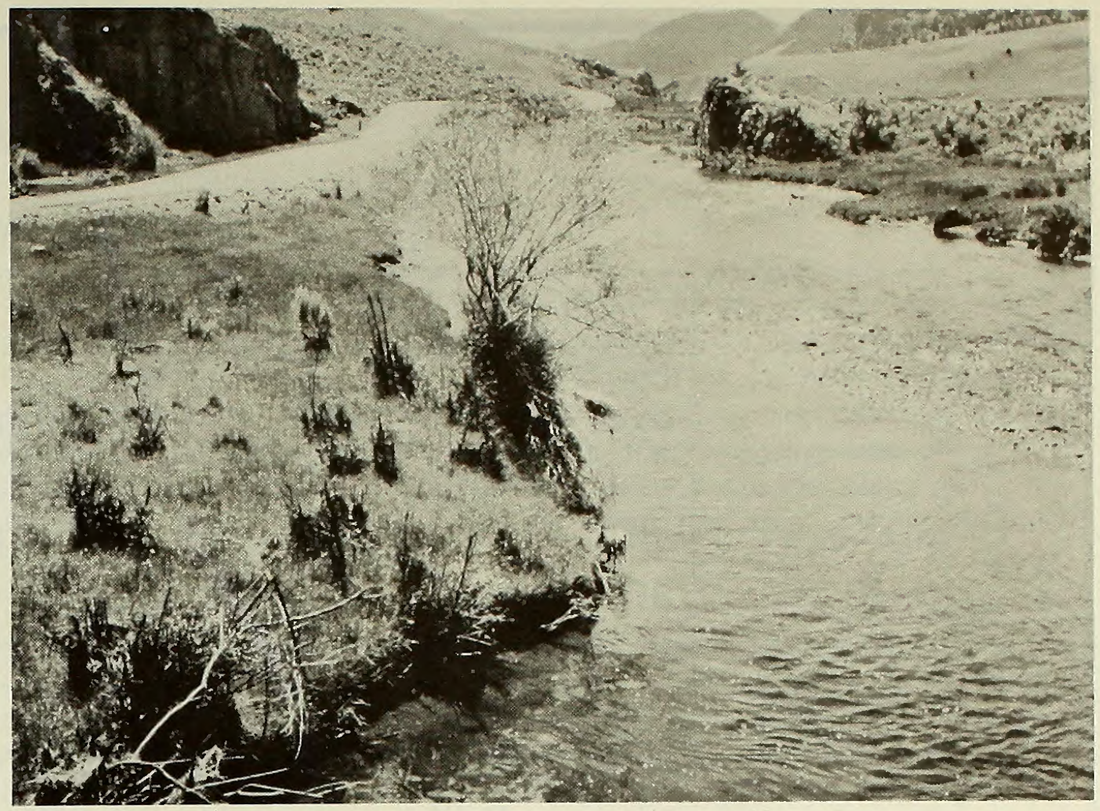
d. Red Rock HMP. The objectives of this plan, which was approved in 1980, are to protect molting habitat for Canada geese and to improve nesting habitat for ducks and nongame birds, including sandhill cranes. The Red Rock HMP area provides molting habitat for the largest concentration of molting Canada geese (9,500 birds) in the intermountain western states. The area also is used by 40,000 to 50,000 ducks as a staging area during fall migratory flights. Thirteen grazing allotments are within the area covered by this HMP. Emphasis will be placed on maintaining isolation for molting geese and increasing residual cover for nesting ducks through intensive management of livestock grazing.

e. Sheep Creek HMP. The objectives of this plan are to increase production of rainbow and brown trout in Big Sheep Creek and to increase populations of west slope cutthroat trout in headwater streams. Big Sheep Creek is a popular fishery that produces trout heavier than four pounds; however, productivity on the lower portions is significantly reduced by sedimentation. Management emphasis will be placed on stabilizing mass wasting sites, increasing shade and pools in small streams, and improving grazing management. The management of ten allotments must be closely coordinated with the HMP so that the goals of watershed stability and riparian management can be met.

4. The rangeland management program and several HMPs will be coordinated and/or integrated with a number of recreation management plans yet to be completed. These are the Madison River and Big Hole River corridor management plans, Axolotl Lakes and Big Sheep Creek Recreation area management plans, and the Lima Reservoir/Red Rock River Corridor Visitor Use Management Plan. The objectives of each recreation management plan will vary in relation to the rangeland management program, and each may require special rangeland management practices to minimize impacts on recreation and scenic resources in specific areas.

5. Approximately five acres in the Badger Pass area will be fenced to exclude livestock grazing to protect a population of Lemhi penstemon, an endangered plant species. Dr. T.J. Watson, a professor of botany at the University of Montana, identified this species as endangered and said it is vulnerable to damage by grazing livestock.

6. The recently completed Dillon MFP called for the removal of the four wild horse herds inhabiting the area. Extensive public exposure to the multiple use recommendation and the horse gathering plans resulted in widespread public approval of the proposed removal. The plan was carried out when a 26-horse herd was gathered in November 1979 and the remaining 101 wild horses were gathered in November 1980. All were shipped to Rock Springs, Wyoming, for the Adopt-A-Horse program.



Sheep Creek HMP Area

Constraints and Mitigating Measures

1. Wilderness considerations may affect implementation of parts of the program. Twenty-five of the 185 AMPs are at least partially within Instant Study Areas or potential Wilderness Study Areas. Of the 25 AMPs so affected, 12 include range development projects subject to the BLM's interim management guidelines for lands under wilderness review. Any proposed project that would impair the wilderness suitability of an area that is subject to the interim management guidelines will be modified to comply with those guidelines.

2. Measures to mitigate environmental impacts described in the Mountain Foothills EIS will be observed. This will include a review of the location and design of proposed projects by an interdisciplinary team.

Before any proposed sagebrush treatments that could affect wildlife browse and cover are carried out, each project will be evaluated in the field in consultation with the Montana Department of Fish, Wildlife, and Parks. This will be done during a two-year review period, as outlined in a memorandum of understanding between the two agencies. Site-specific wildlife recommendations will be prepared for each treatment area so that potential conflicts can be eliminated.

3. Because many AMPs were written as long ago as 1976, each AMP will be reevaluated before implementation to ensure its applicability to current conditions, the soundness of the resource data upon which it is based (including a review of actual use, trend and climatic data, and current range condition), and the mitigation of environmental impacts.

4. Consideration will be given on a case-by-case basis to phasing in livestock reductions over a period of five years where full reductions would impose a severe economic hardship on the affected operator.

Monitoring

Changes in resource conditions will be monitored through various studies designed to evaluate the effectiveness of the livestock management program. The 48 existing AMPs have been monitored since their implementation, and studies are currently being established on other allotments. Changes in vegetation, wildlife habitat, watershed, and aquatic conditions will be monitored by the following means:

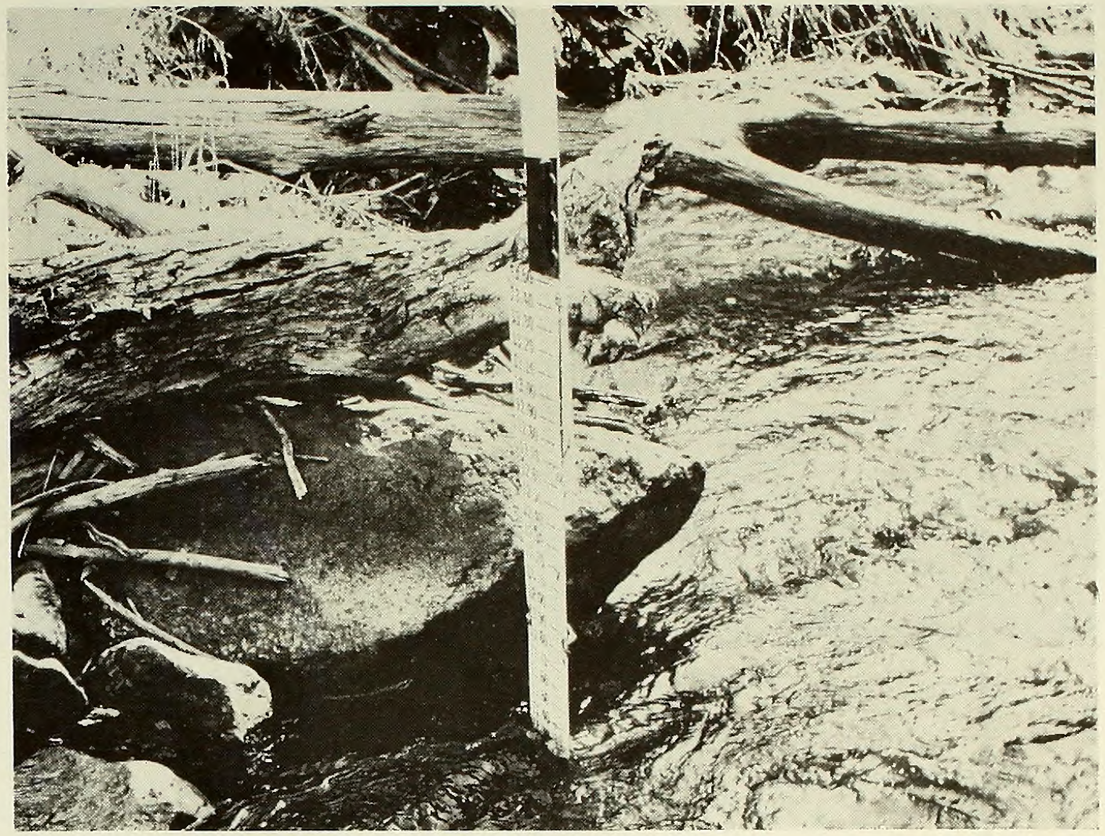
1. Livestock and vegetation: Actual livestock use records will be maintained through more intensive supervision of range use to ensure that livestock numbers and periods of use comply with authorized use. Data on range condition and trend, forage utilization, and climatological factors will be gathered and analyzed periodically to determine the effectiveness of the proposed grazing systems. Allotment management plans will be adjusted where the rangeland management objectives are not being met.

2. Terrestrial wildlife: Studies are being carried out in important wildlife habitat (elk winter range and calving areas, deer winter-spring range, waterfowl breeding areas, and key fisheries) to measure the effect of the rangeland management program on these areas. Allotment management plans also will be adjusted where wildlife habitat management objectives are not being met.

3. Riparian habitat: Permanent photo plots will be established on all streams before AMPs are implemented. Trends in riparian habitat condition will be monitored through periodic reevaluation of riparian surveys and analysis of photo plots. Future adjustments in AMPs will be based on information about riparian habitat condition and trend, as well as on rangeland condition, forage use, and other wildlife habitat objectives. If grazing systems do not maintain satisfactory long-term riparian condition, then exclusion of livestock by protective fencing may be the only recourse on certain sites.

4. Watershed condition and aquatic environments: Fish habitat will be monitored periodically to assess bank cover and stability, fish populations, and water quality. Small protective exclosures have been constructed to help document changes brought about by the implementation of more intensive grazing management systems.

Soil temperature, moisture, erosion, and compaction transects are being established on key allotments to monitor the trends in these parameters following changes in grazing management. Channel stability trends also will be studied on selected streams in the area.



WHAT IT DOES

The rangeland management program is designed to improve the vegetation resource, which provides the foundation for wildlife habitat, livestock forage, soil protection, and recreation. The program is expected to meet this general objective by increasing the area in good to excellent ecologic range condition by 16 percent and by decreasing the area in poor and fair range condition by 31 percent. See table 2, which highlights the resource improvements anticipated in the next 25 years.

A substantial improvement in ecologic range condition in part of the study area has resulted from intensive livestock grazing management. In such a system, a prescribed grazing schedule allows for rest or deferred grazing of individual pastures. In 48 allotments that have been under this kind of range management for 5 to 15 years, 73% of the rangeland is in good to excellent condition and 27% is in poor to fair condition. In 137 allotments for which intensive grazing systems are proposed but have not yet been established, 60% of the rangeland is in good to excellent condition and 40% is in poor to fair condition. Implementation of the proposed grazing systems in these 137 allotments is scheduled for the next five years.

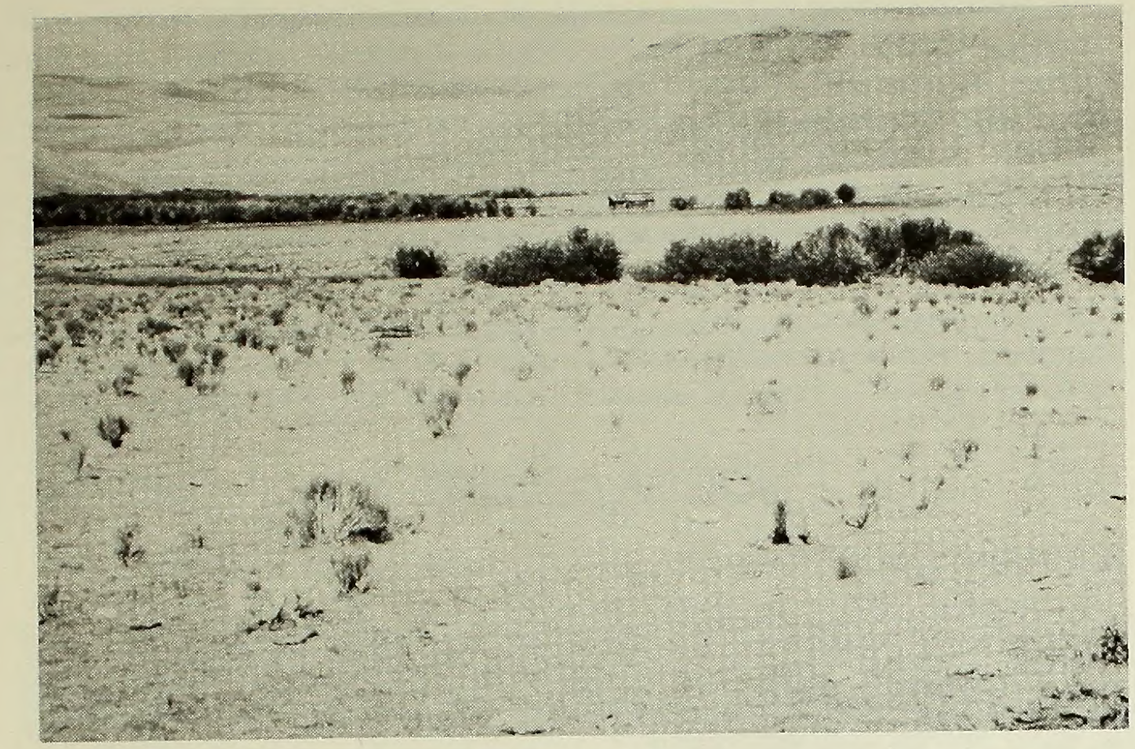
TABLE 2

PROJECTED ENVIRONMENTAL CONSEQUENCES IN 25 YEARS

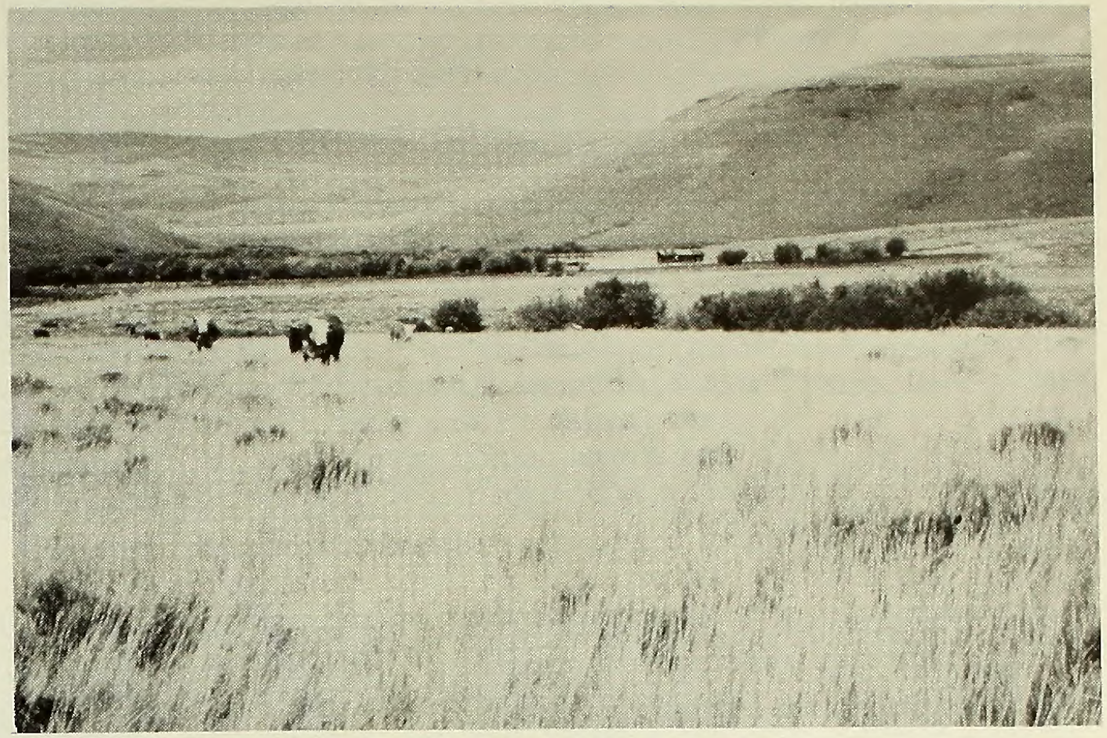
Resource	Existing Situation	25-Year Projection
Rangeland in good to excellent ecologic condition in existing and proposed AMPs	460,523 acres	Increase by 73,779 acres (16%)
Rangeland in poor to fair ecologic condition in existing and proposed AMPs	237,726 acres	Decrease by 73,779 acres (31%)
Livestock permitted use	125,377 AUMs	Increase by 16,520 AUMs (13%)
Total available livestock forage	126,929 AUMs	Increase by 20,156 AUMs (16%)
Sediment yield	2,449,000 tons per year	Decrease by 333,000 tons per year (14%)
Erosion condition on rangeland critical to severe	134,648 acres	Decrease by 3,776 acres (3%)
Erosion condition on rangeland stable to slight	210,172 acres	Increase by 63,538 acres (30%)
Riparian habitat in satisfactory condition (450 miles total)	239 miles	Increase by 76 miles (32%)
Fisheries in satisfactory condition (155 miles total)	82 miles	Increase by 36 miles (44%)
Mule deer		
Satisfactory summer-fall habitat	67%	85%
Satisfactory winter-spring habitat	21%	80%
Elk		
Satisfactory summer-fall habitat	56%	56%
Satisfactory winter-spring habitat	47%	65%
Pronghorn Antelope		
Satisfactory summer-fall habitat	29%	80%
Satisfactory winter-spring habitat	74%	85%
Bighorn Sheep		
Satisfactory habitat	98%	98%
Moose		
Satisfactory habitat	90%	93%
Waterfowl		
Satisfactory habitat	41%	70%
Sage Crouse		
Satisfactory habitat	32%	70%
Total annual income of study area	$485,638,000	Increase by $526,800 (0.1%)
Total net annual ranch income	$ 14,704,220	Increase by $52,980 (0.4%)
Recreation/wildlife-related annual income in study area[a]	$ 316,200	Increase by $181,800 (57%)

SOURCE: BLM, 1980.

a. Applies to elk, deer, and antelope only.



Matador Allotment prior to Intensive Management, 1974



Matador Allotment Showing Increased Forage Production, 1979

The proper allocation of forage, the establishment of realistic livestock grazing systems, and the installation of essential rangeland developments will increase desirable vegetation in most plant communities over the long term. Livestock forage productivity is expected to increase in 25 years from the current 126,929 AUMs to 147,085 AUMs, or a 16 percent increase.

Soil erosion will be reduced. Runoff for the total study area will decrease slightly, and long-term sediment yield will decrease by 14 percent. There will be negligible long-term impacts on groundwater and surface water.

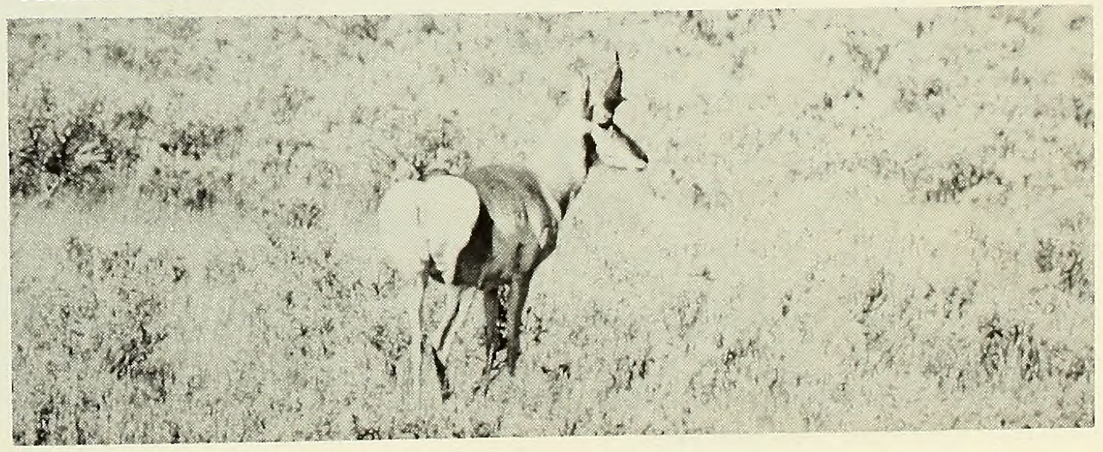
Waterfowl and upland bird habitat will show substantial improvement, as will big game habitat except for elk summer-fall range, which will remain at about 50 to 60 percent satisfactory.

Impacts from livestock on elk summer-fall habitat occur principally in the Ruby Mountains, Blacktail Ridge, and Clark Canyon areas. Conflicts between elk and livestock on summer-fall habitat occur not from forage competition but mainly because elk are socially intolerant of high livestock numbers. Fairly extensive rest pastures that contain the mesic habitat preferred by elk must be available each year so that this conflict can be resolved.

Major reductions in livestock stocking levels have been proposed for several allotments in these areas. If further reductions were imposed at this time to provide for elk, individual livestock operators would suffer additional hardships. Most of the allotments are under intensive grazing management systems that are meeting management objectives, with good to excellent range condition predominating. For these reasons, further reductions will not be sought at this time, nor will revisions be made to grazing systems that are already meeting or moving toward the management goals.

Improved vegetation vigor and reproduction, increased forage production, and an improvement in the quantity and quality of riparian vegetation should lead to an overall moderate increase in wildlife population numbers. Riparian habitat on 450 miles of stream will improve from 53 percent satisfactory to about 70 percent satisfactory.

The quality of most types of hunting and fishing opportunities will improve, with the most significant improvement in opportunities to hunt mule deer, antelope, sage grouse, and waterfowl. The quality of elk hunting opportunities will increase moderately, and moose and bighorn sheep hunting opportunities will remain excellent.

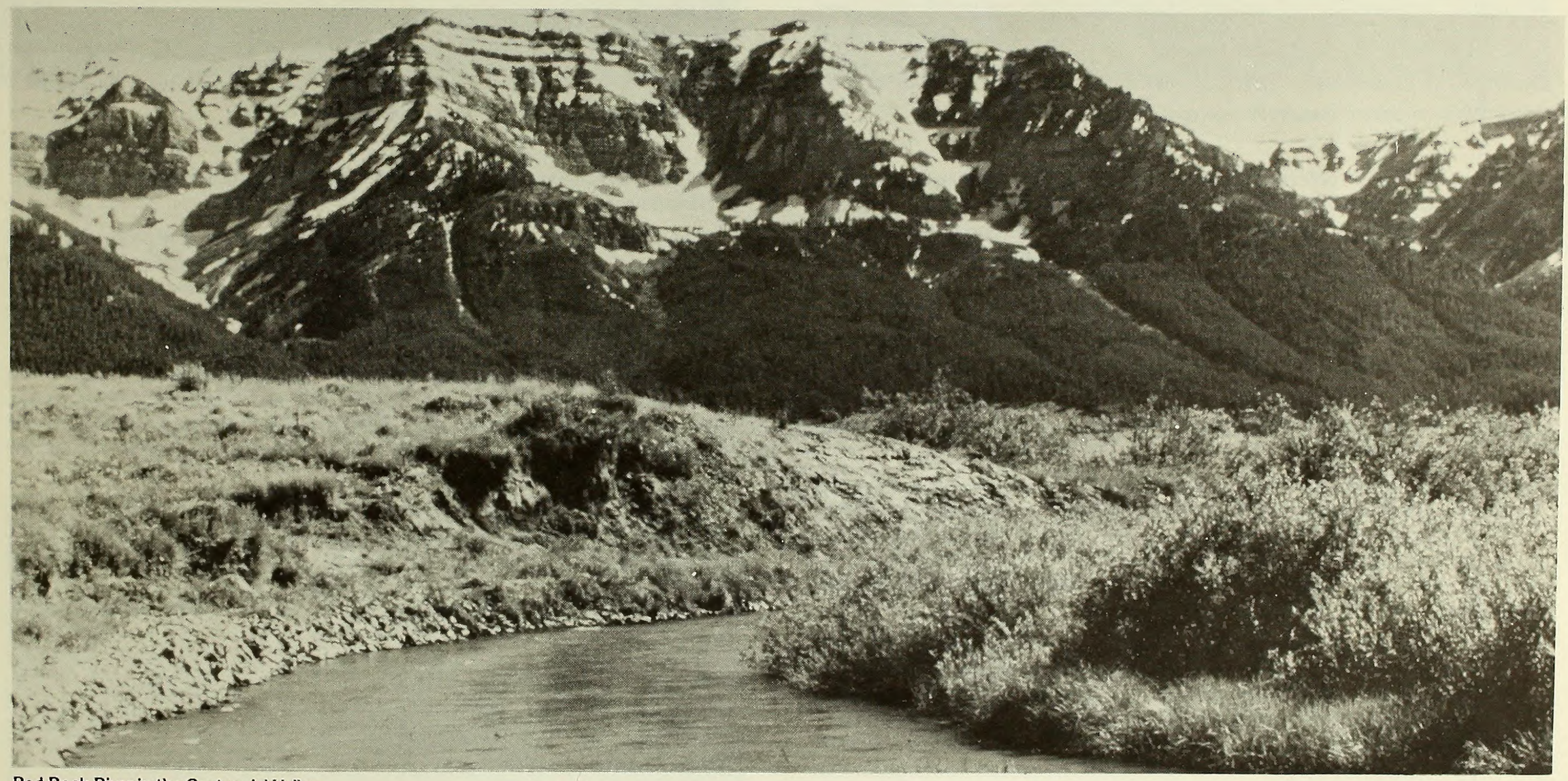


Impacts to visual resources and wilderness values are expected to be minimal. Some minor short-term adverse impacts may occur as a result of vegetation manipulation, spring developments, and other rangeland development projects. However, these impacts will be kept at acceptable levels through interdisciplinary review and through strict adherence to standard mitigating measures.

The current livestock forage allocation level will be reduced by 12 percent initially, but by 2010 it is projected to be 13 percent greater than the present level. Of the 216 ranch operations that lease 25 or more AUMs in the study area, AUM reductions are proposed for 137, AUM increases are proposed for 46, and the stocking level of 33 will not be affected. Of the 137 operations for which AUM reductions are proposed, the reduction will be no more than 15 percent of any operator's total annual grazing requirement. The reduction will be between 10 and 15 percent of the total annual grazing requirements for 7 operations, between 5 and 10 percent for 32 operations, and less than 5 percent for the remaining 98 operations.

The initial overall net reduction in total annual ranch income will be approximately $283,000, which represents about a 2 percent reduction from the current income of the involved ranches. It is estimated that 103 ranch operations will still be leasing fewer AUMs by 2010 and show a loss of income of $180,000. A total of 101 ranches are expected to be leasing more AUMs than at present and to show an increase in income of $233,000. The overall net increase in total annual income by 2010 for all ranch operations will be about $53,000.

As the projected improvement in wildlife habitat provides for increased animal numbers, recreation/wildlife-related direct and indirect earnings for the study area will increase by $182,000 annually, for a total of $498,000 by the year 2010.



Red Rock River in the Centennial Valley

THE ALTERNATIVES

The Mountain Foothills Grazing Management Program EIS analyzed a proposed action (Alternative A) and five additional alternatives. The five other alternatives considered were B, Limited Action; C, Improved Watershed Values and Wildlife Habitat; D, Accelerated Livestock Forage Development; E, No Action; and F, Elimination of Livestock Grazing from Public Lands.

The following section briefly describes and evaluates the alternatives not selected.

ALTERNATIVE B: LIMITED ACTION

This alternative assumed continued operation of the 48 existing AMPs within the study area. Existing range developments would have been maintained, and several new range developments would have been constructed in connection with 22 existing AMPs identified for revision. Construction costs for this alternative, $202,000 (1978 dollars), would have been minimal in comparison with the other alternatives.

Livestock use would have been adjusted to a new stocking rate of 110,033 AUMs, as in the proposed action. However, this alternative assumed no change in the status of the non-AMPs and unallotted areas; that is, no implementation of new AMPs. Range use supervision, soil and vegetation monitoring, and project development would have continued at the present level.

This alternative was not selected because, of the various courses of action analyzed, it ranks fifth in terms of improving range condition. The AUMs projected to be harvested by livestock by 2010 would have been 5 percent less than the current permitted use. All wildlife habitats would have remained essentially unchanged except for elk winter habitat, which would have improved slightly. Erosion over the long term would have been reduced slightly. Annual income to the local livestock industry would have been reduced by $201,520 in the long term.

ALTERNATIVE C: IMPROVED WATERSHED VALUES AND WILDLIFE HABITAT

This alternative proposed a selective level of livestock use of 74,785 AUMs, which is 50,592 AUMs (40 percent) less than the existing stocking level. It also assumed implementation of range developments and grazing systems that generally would have given consideration to watershed and recreation values and wildlife habitat, and it assumed that no forage produced in the future in excess of the current situation would be allocated to livestock.

Livestock stocking levels for this alternative were derived from the following criteria for allotments now in unacceptable condition: (a) elimination of livestock grazing on selected allotments from April 1 through June 15, (b) allocation of vegetation on most areas of critical or severe erosion condition to watershed, (c) implementation of grazing systems that incorporate an additional rest period, (d) pasture capacity stocking, (e) allocation of vegetation on the basis of the amount and type of fish and wildlife habitat present in each allotment, and (f) exclusion of grazing to resolve use conflicts or improve recreation opportunities at specific recreation areas.

Riparian habitat was given special consideration through (a) protective fencing and exclusion of grazing on 39.2 miles of stream as compared to 20.1 miles ungrazed at present, (b) stocking reductions, and (c) changes to 34 grazing systems that were outlined in the proposed action. These changes were designed to improve riparian habitat from unsatisfactory to satisfactory condition.

Range developments proposed under this alternative included approximately 300 miles of new fence, 17 miles of fence removal, 260 miles of fence alteration, 30 cattleguards, 40 wells, 61 spring developments, 79 miles of water pipeline, 189 stockwater tanks, and vegetation manipulation practices including 1,022 acres of prescribed burning, 2,900 acres of sagebrush spraying, and 2,150 acres of plowing and seeding or interseeding. The total cost to implement these range developments would have been about $1,805,000 (1978 dollars). The developments would have been necessary to implement viable grazing systems while also benefiting wildlife habitat and watershed conditions.

The benefits to wildlife habitat resulting from implementation of this alternative would have been exceeded only by the alternative to eliminate livestock grazing. Major improvements would have occurred in mule deer winter-spring habitats, elk habitats, antelope summer-fall habitats, waterfowl nesting areas, and all sage grouse habitats. Riparian habitats in satisfactory condition would have increased from 53 percent to 92 percent. This also would have been one of the best alternatives for improvement of erosion condition. Lands in good to excellent ecologic range condition would have increased by an estimated 17 percent, while lands now in poor to fair condition would have decreased by 32 percent.

Several of the concepts included in this alternative have been incorporated into the selected rangeland management program. They are as follows:

Changes in Grazing Systems

Considerable public comment was received regarding the proposed grazing management system on the Idaho-Jack allotment (0499). The proposed system is being changed in favor of one more beneficial to elk. Half of the

allotment will be rested each year to provide for elk forage needs and to improve the vigor of key forage plants. This revised system will be closely evaluated on a joint basis with the Montana Department of Fish, Wildlife, and Parks. This allotment will have pasture level stocking.

Grazing systems in several other allotments also have been adjusted to better accommodate wildlife use and avoid conflicts that would have occurred under the original proposed action. In the Armstead-Upper Sage allotment (0007) and Gallagher Mountain allotment (0013), the proposed management decision has been modified to take advantage of a recent ownership change by combining the two allotments and developing a new rest-rotation system that will provide an annual rest pasture of high quality habitat for elk summer use. Previous management under a deferred rotation system conflicted with elk summer use of high quality habitat because there was no rest pasture and because elk are socially intolerant of high-density cattle use.

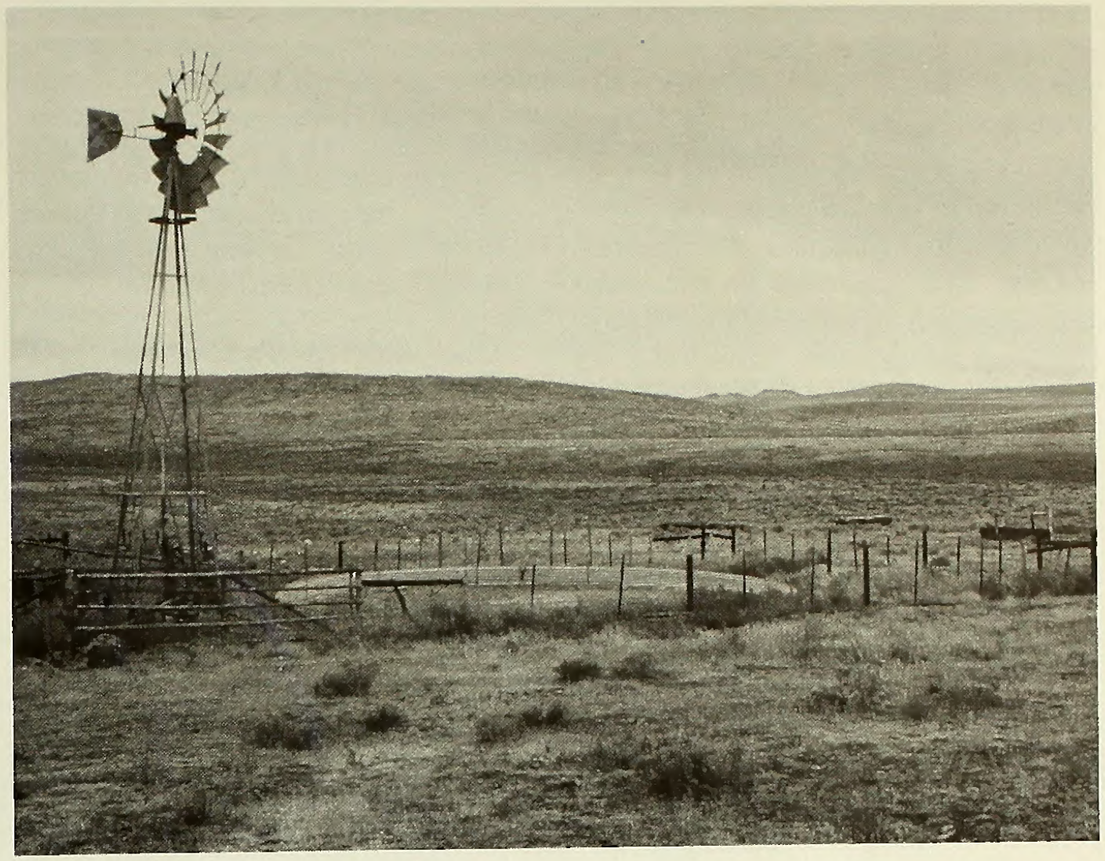
A similar change was adopted on the Hansen allotment (0108), where the proposed action would have authorized winter sheep grazing on crucial deer winter habitat. The decision was made to change the proposed system and continue with current grazing practices, which do not conflict with deer winter use.

Domestic sheep-proof fencing currently conflicts with antelope movement on several allotments in the study area, particularly on the Rock Creek allotment (0512). Woven-wire fences on this allotment will be modified by constructing 100-foot barbed wire panels with a 16-inch bottom wire. Woven wire will be extended over these panels only when sheep are present and will be rolled back during the rest of the year to allow antelope passage. This technique and others will be used throughout the study area wherever fences impede big game movement.

A detailed field analysis will be conducted on the elk winter range portion of the Price Creek allotment (0040), an existing AMP, so that the amount of forage available to wintering elk can be thoroughly evaluated. On the basis of the percentage of the winter range comprising public lands, sufficient forage will be allocated to meet elk needs. This may require stocking adjustments; these adjustments also will benefit riparian habitat and moose habitat in this allotment.

Water Developments

A number of water developments in addition to those identified through the planning process may be constructed in areas where new water sources are needed to further improve wildlife habitat. Allotments where these are being considered include PHW (0031), Red Mine (0034), Strawberry Ridge (0421), and Garden Creek (0479), where the specific purpose of the developments would be to reduce grazing pressure in riparian areas. Such developments will undergo environmental analysis and interdisciplinary review before implementation is approved.

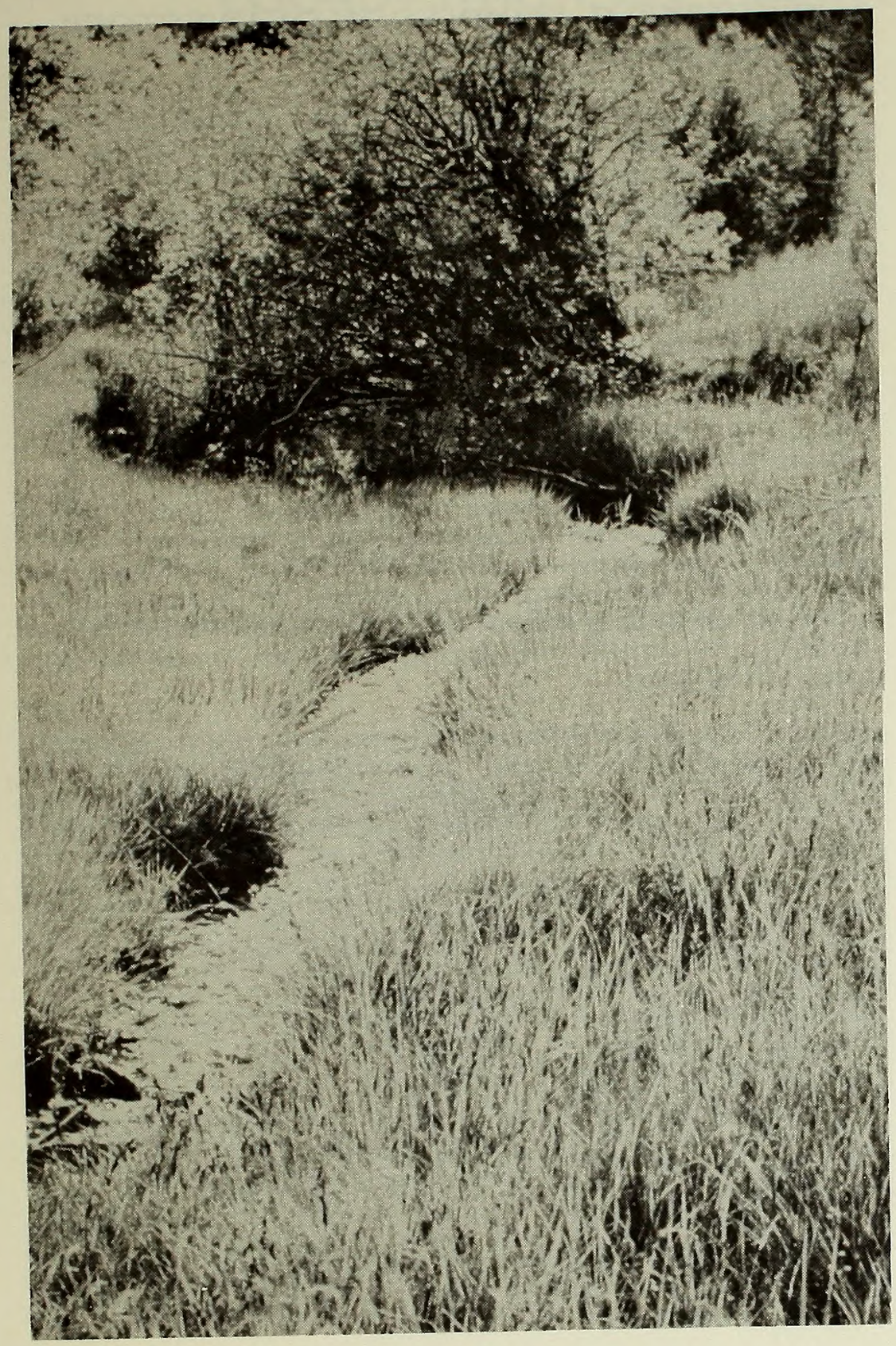


Exclusion of Livestock Grazing

Approximately 3,000 acres will be deleted from the Nicholia allotment (0699) in order to facilitate a proposed introduction of bighorn sheep. Although the entire 3,000 acres is currently leased for grazing, it is being used by livestock only incidentally, and only 228 acres is potentially suitable for livestock use. The exclusion of livestock from this area will eliminate the possibility of future conflicts between bighorn sheep and domestic livestock. The size of the allotment will be reduced from that shown on the grazing allotment map in the draft EIS, but the proposed grazing system and the operator's grazing preference will not be affected.

Riparian Management

Most riparian habitat on the Madison and Big Hole rivers is on small non-AMP tracts that are difficult to control without fencing. In response to public concern, emphasis will be placed on protecting and managing poor condition tracts through fencing; however, some of these tracts may be too small to warrant the expense of fence construction and maintenance. Management feasibility will be reviewed by a task group consisting of landowners or permittees, sports enthusiasts, BLM personnel, Montana Department of Fish, Wildlife, and Parks personnel, and other interested persons.



Other components of this alternative were not incorporated into the program because of the substantial adverse social and economic impacts they would have had in the local area and because many of the factors (range and erosion condition and wildife habitat) already had been considered in the development of the selected program. Reductions in income totaling $807,520 annually would have occurred to 190 ranch operations in both the short term and the long term. The impact on 45 small commercial ranch operations would have been most significant, with net ranch income being reduced an average of about 20 percent from current levels. Probably 15 to 20 of those operations that would have suffered higher than average impacts would have been forced out of business, or the operators and their families would have been forced to seek supplemental employment.

ALTERNATIVE D: ACCELERATED LIVESTOCK FORAGE DEVELOPMENT

This alternative would have provided for accelerated livestock forage development by the use of extensive vegetative manipulation practices (sagebrush spraying, prescribed burning, and reseeding), with the primary objectives of removing or suppressing undesirable plant species, increasing livestock forage production, and accelerating range condition improvement. The initial stocking rate, after the vegetation manipulations described below had been completed, would have been 37,397 AUMs more than the 125,377 AUMs of current permitted use. All forage produced in the future in excess of the current situation would have been allocated exclusively to livestock after proper use factors had been considered.

Range developments for this alternative would have been the same as those for the proposed grazing management program, except for the number of acres prescribed for vegetative manipulation. This alternative proposed 30,725 acres of prescribed burning, 36,160 acres of sagebrush spraying, and 14,483 acres of plowing and seeding or interseeding. The temporary loss of AUMs on the treated areas would have been a short-term impact, with the lost AUMs restored approximately two years after land treatment. The total cost to implement all developments would have been about $2,658,000 (1978 dollars).

Of all the alternatives, this action would have brought about the greatest improvement in ecologic range condition. Lands in excellent and good condition would have increased by 20 percent, while lands in poor to fair condition would have decreased by 38 percent.

The total ranch income in the study area would have increased by $233,850 annually, or less than 2 percent.

This alternative was not selected because of the adverse impact it would have had on wildlife habitat, cultural resources, visual resources, and recreation opportunities. Major declines in habitat condition would have occurred on mule deer summer-fall habitats, elk and antelope winter-spring habitats, big-

horn yearlong habitats, and all seasonal sage grouse habitats. Deer, elk, riparian, and waterfowl habitats would have remained in largely unsatisfactory condition.

Significant adverse impacts to the quality of hunting and fishing opportunities also would have occurred. Recreation access would have been significantly reduced; at the same time, naturalness and opportunities for primitive recreation and solitude would have decreased significantly.

ALTERNATIVE E: NO ACTION

The no action alternative assumed continuation of the present grazing management program. The existing level of livestock use would have remained unchanged. No new range developments would have been constructed; however, existing developments would have been maintained. This alternative assumed continued operation of existing AMPs, implementation of no new AMPs, and continued permitting of livestock use at present levels. In addition, unallotted status on approximately 41,000 acres of public land would have continued, and trespass control through supervision of range use would have continued. The levels of personnel and funding would have remained unchanged.

This alternative was not selected because it would have permitted range condition to continue to decline. Increases in critical and severe erosion condition, from 134,648 to 157,340 acres, or a 14 percent increase, would have been worse than for any of the other alternatives.

All wildlife habitats would have remained essentially unchanged; largely unsatisfactory habitats would have continued for mule deer and elk winter-spring use, antelope summer-fall use, waterfowl nesting, and all sage grouse use periods. Elk summer-fall habitats would have remained 40 to 50 percent unsatisfactory. The actual amount of forage available for livestock probably would have decreased over the long term, causing ranch operators eventually to reduce livestock numbers; thus, there probably would have been some reductions in real ranch income.

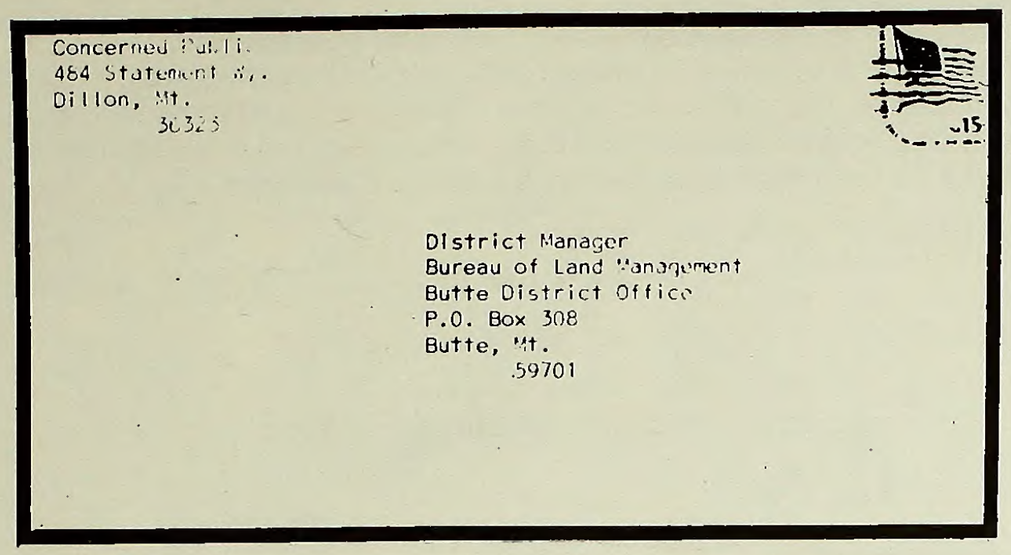
ALTERNATIVE F: ELIMINATION OF LIVESTOCK GRAZING FROM PUBLIC LANDS

This alternative assumed elimination of domestic livestock grazing from approximately 955,000 acres of public land. No new AMPs would have been implemented, and all existing AMPs would have been terminated. Because private and public lands are intermingled throughout large portions of the study area (only 14 percent of the study area is public land), extensive fencing would have been needed to control livestock trespass on public lands. It was estimated that, on a worst-case basis, 2,700 miles of fence, which would cost about $6,000,000 (1978 dollars), would have been necessary to exclude livestock from public lands. An additional $41,600 would have been needed to alter existing fences to meet deer and antelope specifications. The monitoring of public land use would have become a major BLM workload. Range developments would not have been constructed or maintained unless they were necessary for other resource programs such as wildlife or watershed.

This alternative was not selected because of the extreme adverse social and economic impacts it would have had on the local area. Elimination of livestock grazing would have reduced the income of all 370 ranch families that lease BLM grazing. The overall net reduction in income to the 216 ranch operations would have totaled $1,862,680 annually, a 13 percent reduction from the present total income level. At least 18 of these operations probably would have been forced out of business.

The extensive fencing required by this alternative could have caused substantial problems in wildlife movement. This alternative would have resulted in the greatest short-term improvement in erosion condition and slight improvement in ecologic range condition. Most wildlife habitats would have improved to satisfactory condition; however, the total elimination of livestock grazing and the expenditure of public funds to the degree identified in this alternative would not have been justified on a multiple use basis.

COORDINATION, CONSULTATION, AND PUBLIC INVOLVEMENT



CONSULTATION DURING DEVELOPMENT OF THE EIS

Consultation and coordination with agencies, organizations, and individuals occurred in a variety of ways throughout the land use planning and EIS preparation process. Update and revision of the existing land use plan for the study area (the Dillon Management Framework Plan, or MFP) began in 1976. Resource data gathered in the concurrent development of allotment management plans was recycled into the resource data base used in the land use planning process. During this update process, federal, state, and local organizations were contacted for assistance.

All public land users and other interested groups and individuals were notified through letters and news releases of the initiation of the planning system updates. From May 6 through May 24, 1979, five open house workshops were held in the towns of Dillon, Butte, Sheridan, Ennis, and Lima to present the multiple use recommendations from the MFP. In addition, more than 1,100 brochures that outlined the major resource issues and requested public input were distributed to a wide cross-section of the public. More than 100 written comments were returned. Discussion of the Mountain Foothills EIS with interested parties occurred throughout the update process.

Nearly all livestock operators provided input during preparation of the draft AMPs, and each operator was notified of the proposed action as described in the AMPs affecting his or her operation. All AMPs were available for review by livestock operators and public interest groups.

Public involvement throughout the integrated process of planning system updates and AMP development stressed the close ties with the upcoming EIS. Numerous meetings were held over the two and one-half year period with public agencies, service organizations, special interest groups, and private individuals so that the entire process could be explained and comments solicited.

PUBLIC REVIEW OF THE EIS

A 52-day public comment period (March 26 through May 16, 1980) was provided on the draft EIS to allow for public review and comment on the adequacy of the environmental impact analysis for the proposed action and alternatives.

The notice of availability of the draft EIS was published in the *Federal Register* of March 26, 1980. The notice listed the BLM district and resource area offices and announced public meetings in Butte, Sheridan, Dillon, and Lima during the week of April 14, 1980.

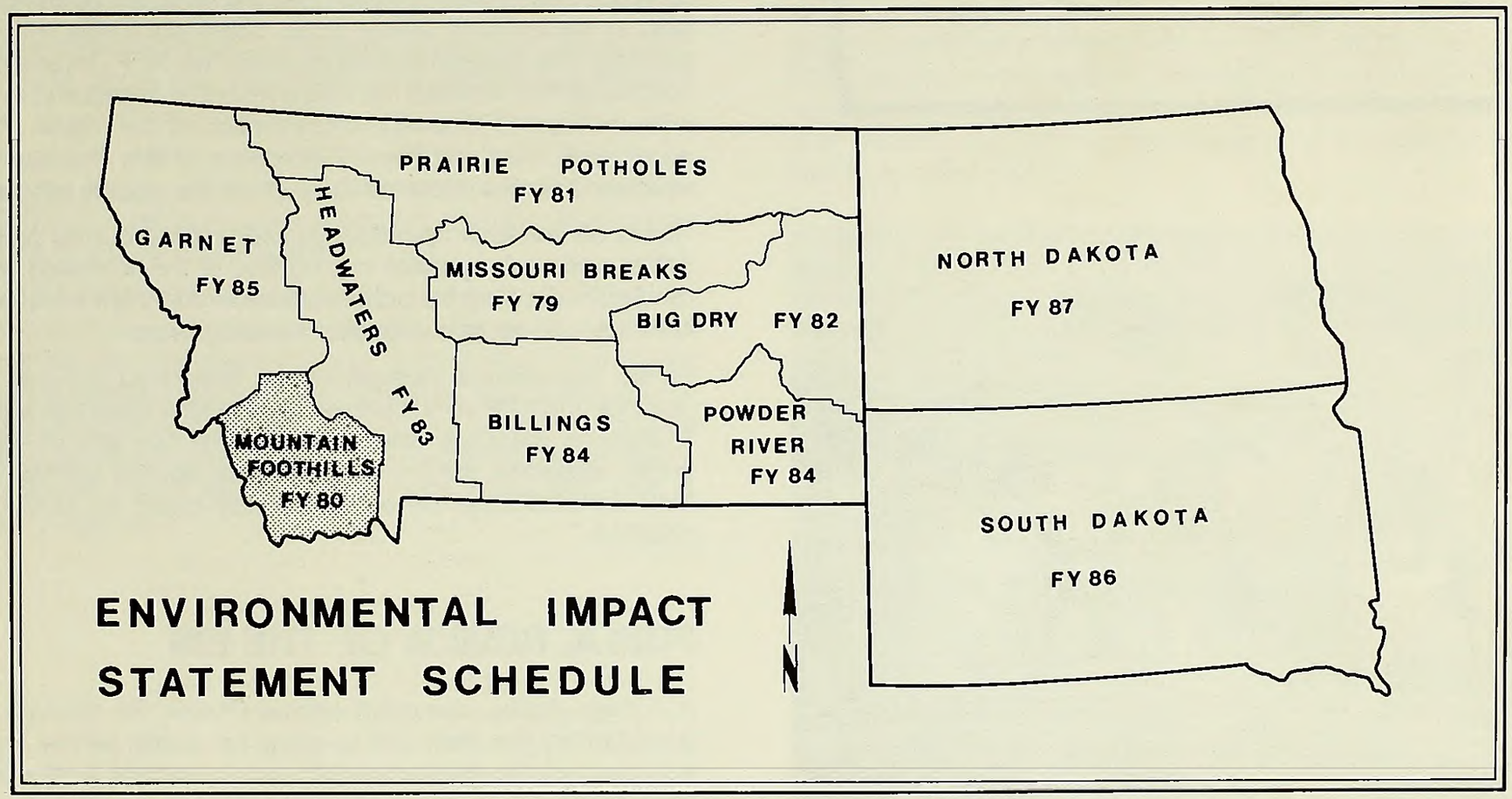
Approximately 600 copies of the draft EIS were distributed. All individuals on the comprehensive district mailing list received postcards that they could return if they were interested in receiving the draft and final documents. Copies were mailed to 31 federal, state, and local government agencies and to non-government organizations and individuals for review and comment. In addition, copies of the draft EIS were sent to all livestock operators with grazing privileges in the study area.

All groups and individuals that requested them received copies of the EIS, and copies were sent to university and public libraries in Missoula, Butte, Dillon, Great Falls, Helena, and Bozeman, where they were available for public review.

In addition to the *Federal Register* notice, a news release announcing the availability of the draft EIS was issued on April 7, 1980, to two wire services, nine daily newspapers, 27 weekly newspapers, 32 radio stations, and seven television stations throughout western Montana.

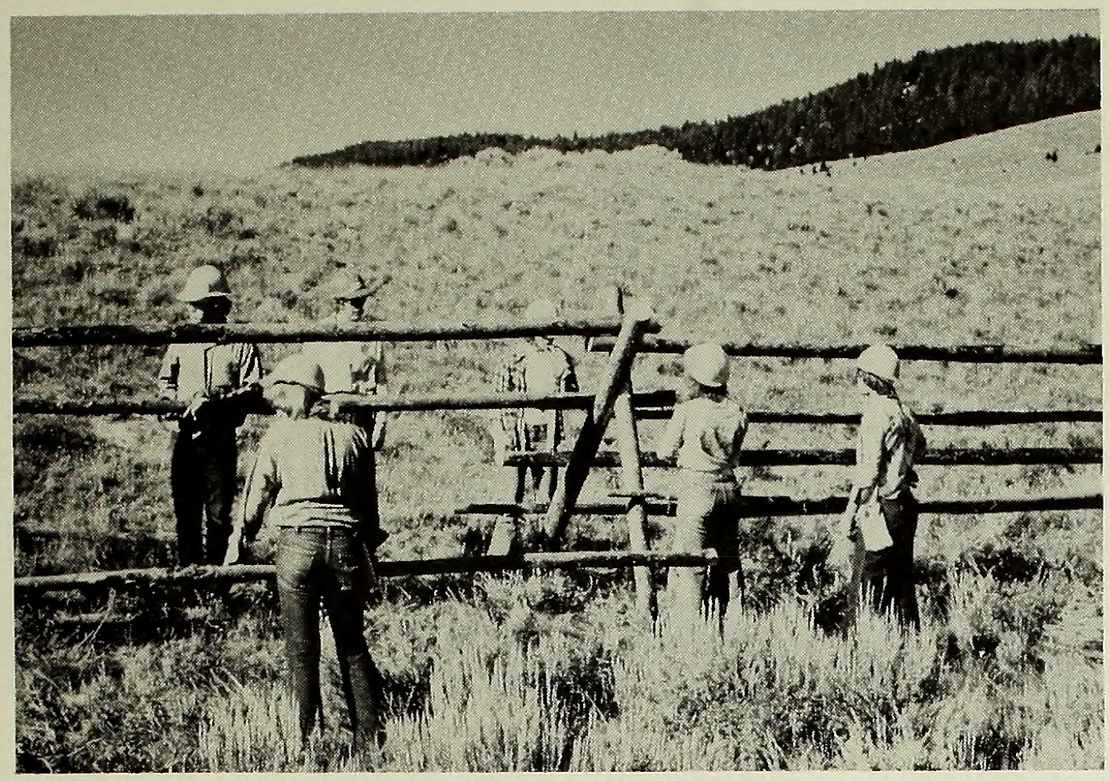
During the review process, 34 letters were received from federal, state, and local agencies, private organizations, and interested citizens. All comments received in letters and at the public hearings were carefully considered in the development of the final environmental impact statement and in the selection of the recommended course of action.

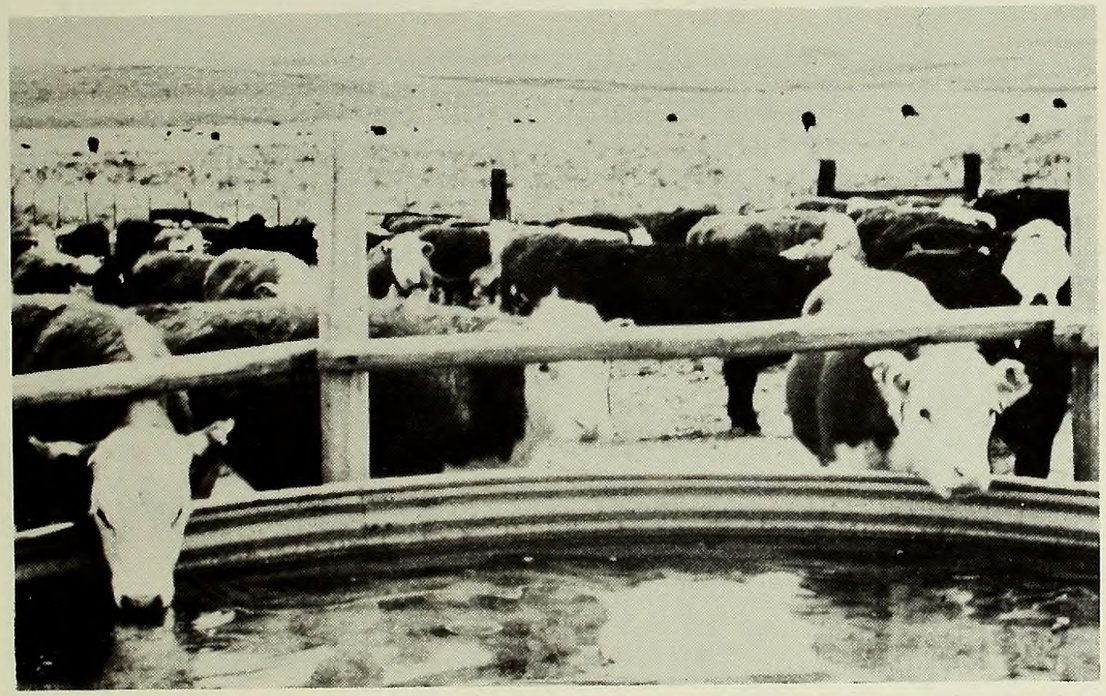
In the final EIS, issued in September 1980, detailed responses were made to all comments that presented pertinent new information, questioned impact analysis or data, or raised issues related to the proposed action or the alternatives—a total of 20 comments from meetings and 206 from letters.



The Mountain Foothills EIS is one of ten in the area scheduled for completion in the fiscal years shown on the map.

IMPLEMENTATION





ADMINISTRATIVE ACTIONS

The proposed rangeland management program will be implemented over a period of five years beginning in 1981. The steps and schedule for implementing the program are as follows:

Grazing decisions will be issued to 150 livestock operations in 1981 and to the remaining 118 operations in 1982. The decision to each operation will specify whether the present situation will be maintained or adjustments will be made in grazing preference (number of AUMs leased or permitted), grazing period, or livestock numbers. In some cases, existing AMPs will be made a part of the grazing decision; however, separate decisions on grazing preferences and on AMPs will be needed in most cases. Decisions requiring a reduction in preference will indicate the number of AUMs that will be carried in suspended preference.

Each livestock operator will be consulted before a grazing decision is issued. Notices also will be sent to the state land commissioner, any lienholder of record, any absentee owner, and any person or organization that has made a special request for notification.

Grazing systems will be initiated as soon as the necessary rangeland development projects are completed and operational. Rangeland development projects scheduled for implementation in 1981 are now being designed. The field work and preliminary contract preparation for the 1981 projects will be completed by the spring of 1981. If adequate funding and personnel are available, all rangeland developments will be constructed and operational by 1984.

A comprehensive resource monitoring plan is now being developed. Studies have been and are being established to monitor various resources periodically so that BLM specialists can determine if resource objectives are being met. The data from these studies will help management to determine whether grazing systems, levels of grazing, and rangeland development projects should be continued as planned or modified to better meet the objectives.

All completed AMPs will include the following information:

1. objectives of plan
2. authorized allocation of livestock forage
3. grazing system(s) to be followed
4. rangeland developments needed to make the plan operational
5. resource studies needed to monitor progress

RANGELAND DEVELOPMENTS

Priorities

Rangeland development projects required for full implementation of the proposed rangeland management program are listed by allotment in tables 3 and 5 and summarized in tables 4 and 6. These lists reflect a number of changes made since publication of the draft Mountain Foothills EIS. The changes were based on additional economic and engineering considerations and AMP modifications, and on evaluation of public comments on the Mountain Foothills EIS.

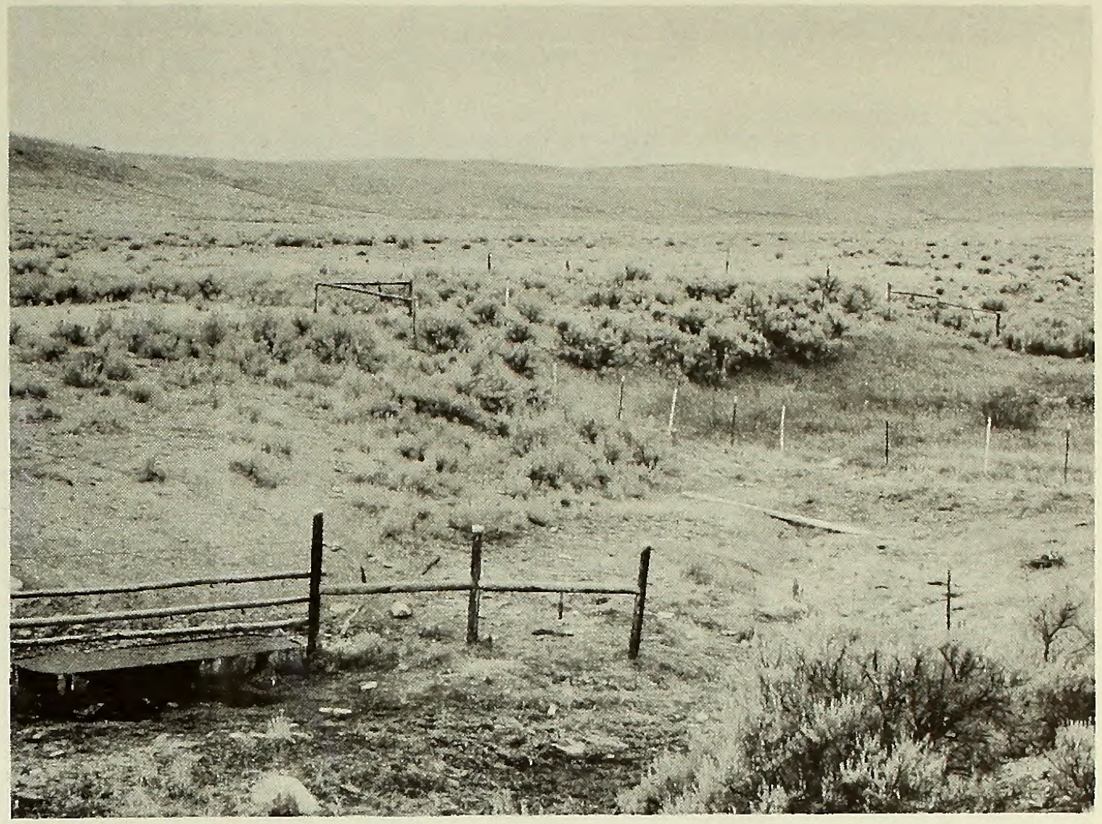
The estimated cost for the proposed rangeland developments, based on 1980 dollars, is $2.4 million. Implementation of rangeland developments will begin in 1981 and continue over a four-year period. Priority has been given to developments needed for full implementation of existing AMPs that are undergoing revision. Rangeland development projects in these allotments will be initiated in 1981, except for specific projects for which a longer lead time is required for survey, design, or acquisition of easements.

Rangeland development projects that are needed to resolve critical resource problems also will be implemented early in the program, as will projects in AMPs with high benefit:cost ratios, projects for which labor and/or materials are contributed by users, and projects with significant public support or interest. Priority also has been given to implementation of range developments in proposed AMP allotments for which environmental analysis, survey, and design are underway or complete.

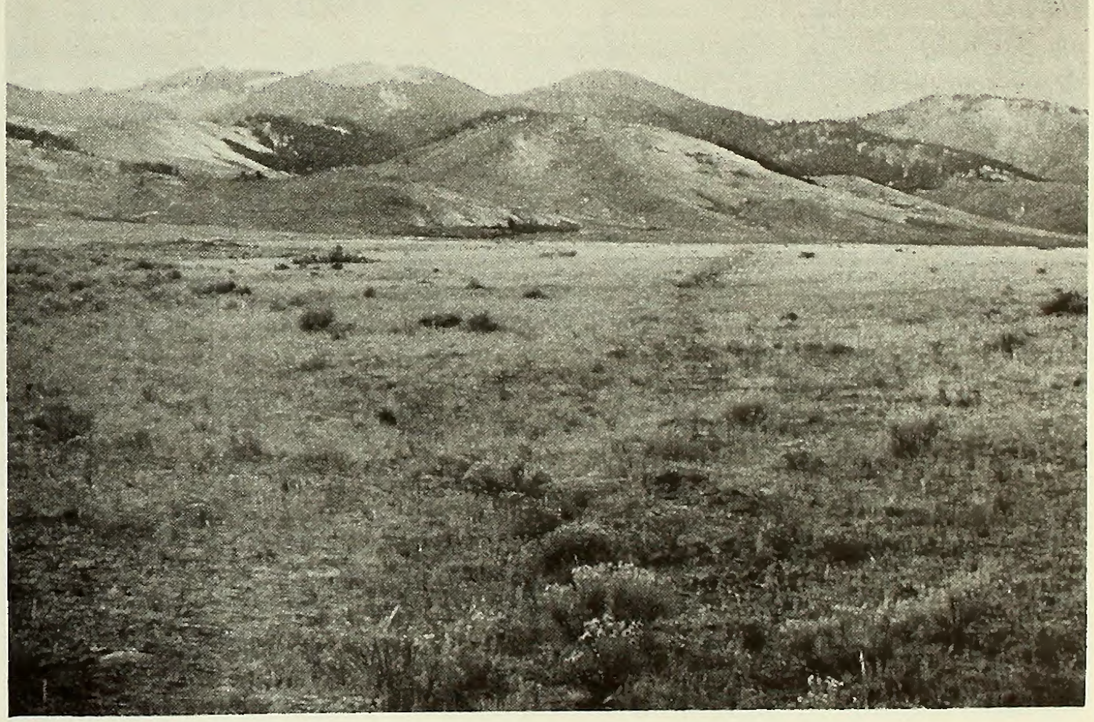
Water projects will be completed as early in the program as possible. New water sources must be developed in many allotments before fences are constructed so that creation of dry pastures can be avoided.

Some projects with priority will not be constructed early because easements or water rights will have to be acquired first. Other projects may be delayed because of a need for more coordination between the BLM, the Forest Service, the state of Montana, and private operators. Allotments within the East Pioneer Stewardship Area generally will require a longer time for full implementation because of coordination requirements. An effort is being made to implement rangeland developments in a cost-effective manner by geographic grouping, which will minimize travel and supervision costs. In some cases this will result in lower priority projects being implemented simultaneously with high priority projects.

A five-year schedule has been established for implementation of grazing systems in proposed AMP allotments. This schedule was based on resource values and the need for rangeland developments (see table 5).



Spring Development and Stock Tank



Buried Pipeline after Rehabilitation

TABLE 3

EXISTING AMP ALLOTMENTS

RANGELAND DEVELOPMENTS SCHEDULE

Allot. No.	Name	Development	Units	Year
0001	Pine Creek	New fence	0.5 mi.	1982
0002	Clark Canyon	Springs	2	1981
		Pipeline	0.5 mi.	1981
		Stock tanks	6	1981
		Pipeline	4.5 mi.	1982
		Stock tanks	9	1982
		New fence	0.8 mi.	1982
0004	Selway	Springs	2	1983
		Stock tanks	3	1983
		Pipeline	2.0 mi.	1984
		Stock tanks	2	1984
0005	Stonehouse	Reservoir	1	1982
		Pipeline	2.5 mi.	1982
		Stock tanks	12	1982
		Well	1	1984
		Spring	1	1984
		Stock tanks	4	1984
0007	Armstead-Upper Sage	None		
0009	Junction Seeding	None		
0010	Crooked Creek	None		
0011	Mosman	None		
0012	Matador	New fence	4.0 mi.	1982
0013	Gallagher Mtn.	None		
0014	Barretts	New fence	3.0 mi.	1982
0015	Bannack	Well	1	1981
		Pipeline	2.0 mi.	1982
		Stock tanks	12	1982
		Spring	1	1983
		Stock tanks	2	1983
		New fence	2.0 mi.	1983
		Well	1	1984
		Pipeline	1.0 mi.	1984
		Stock tanks	2	1984
0016	Chinatown	None		
0017	Coyote Flats	Cattleguard	1	1984
0018	Bear Creek	Springs	2	1983
		Stock tanks	4	1983
0019	Rape Creek	Springs	2	1984
		Stock tanks	4	1984
0020	North Black Canyon	Springs	2	1981
		Stock tanks	4	1981
		New fence	4.5 mi.	1981
		New fence	1.5 mi.	1982
		Springs	2	1984
		Stock tanks	4	1984
0021	Leadman	Remove fence	1.0 mi.	1981
		Well	1	1981
		Pipeline	1.5 mi.	1982
		Springs	2	1982
		Stock tanks	14	1982
0022	Dixon Mtn.	None		
0025	Trail Creek	None		
0026	Anderson Field	None		
0027	Tallent	New fence	0.5 mi.	1981
0028	Scudder Creek	None		
0029	Snowline	None		
0030	Reservoir Creek	Relocate fence	0.7 mi.	1983
		New fence	0.8 mi.	1983
0031	PHW	Remove fence	1.0 mi.	1981
		New fence	4.0 mi.	1981
		Well	1	1982
		Pipeline	0.5 mi.	1982
		Stock tanks	6	1982

TABLE 3--page 2

Allot. No.	Name	Development	Units	Year
0032	Exchange Pasture	Spring	1	1982
		Pipeline	1.0 mi.	1982
		Stock tanks	8	1982
0033	Cross	Well	1	1984
		Pipeline	0.1 mi.	1984
		Stock tanks	2	1984
		Plow, seed	831 acres	1984
0034	Red Mine	Spring	1	1981
		Pipeline	1.0 mi.	1981
		Stock tanks	8	1981
		New fence	0.3 mi.	1981
		Spring	1	1982
		Stock tanks	2	1982
		Pipeline	1.0 mi.	1983
		Stock tanks	4	1983
		Cattleguard	1	1983
0035	Brenner Seeding	Remove fence	1.5 mi.	1983
		New fence	1.5 mi.	1983
0037	Baldy Mtn.	Spring	1	1982
		Stock tanks	2	1982
		Springs	2	1984
		Stock tanks	4	1984
0038	Buck Creek	Pipeline	3.0 mi.	1982
		Stock tanks	8	1982
		New fence	7.0 mi.	1984
0039	Muddy Creek	Springs	2	1984
		Stock tanks	4	1984
0040	Price Creek	None		
0041	Rock Creek	None		
0042	Meadow Creek	None		
0116	Conover	Springs	3	1982
		Pipeline	0.1 mi.	1982
		Stock tanks	5	1982

Allot. No.	Name	Development	Units	Year
0167	Robb Creek	None		
0268	Iron Rod	None		
0301	Copp-Jackson	None		
0303	Moose Creek	Cattleguard	1	1981
0308	Camp Creek	Well	1	1981
		Stock tank	1	1981
		Pipeline	2.0 mi.	1982
		Stock tanks	6	1982
		Well	1	1983
		Stock tanks	2	1984
		Cattleguard	1	1984
0317	Greenstone	None		
0318	Jerry Creek	None		
0324	Rochester Basin	None		
0335	Lelow Basin	Spring	1	1981
		Stock tanks	2	1981
		Sagebrush burn	660 acres	1984
0471	Sweetwater	Springs	3	1982
		Stock tanks	3	1982
		Pipeline	2.0 mi.	1983
		Stock tanks	6	1983
0749	Deer Canyon	None		

TABLE 4

EXISTING AMP ALLOTMENTS
RANGELAND DEVELOPMENTS SUMMARY

Type Of Development	Unit of Measure	Unit Cost[a] (1980 Dollars)	Units Programmed				Total Program	
			1981	1982	1983	1984	Units	Costs
New fence	Mile	$2,500.00	9.3	9.8	4.3	7.0	30.4	$76,000
Relocate fence	Mile	1,500.00	0	0	0.7	0	0.7	1,050
Remove fence	Mile	600.00	2	0	1.5	0	3.5	2,100
Cattleguards	Each	2,400.00	1	0	1	2	4	9,600
Springs	Each	1,800.00	7	11	5	9	32	57,600
Reservoir	Each	2,500.00	0	1	0	0	1	2,500
Wells[b]	Each	27,200.00	3	1	1	3	8	217,600
Pipeline	Mile	5,280.00	1.5	17.1	3.0	3.1	24.7	130,416
Stock tanks	Each	225.00	21	87	19	28	155	34,875
Plow, seed	Acre	15.00	0	0	0	831	831	12,465
Sagebrush burn	Acre	2.50	0	0	0	660	660	1,650
Alter fence	Mile	320.00	12.4	30.6	30.6	30.7	104.3	33,376
Total Cost								$579,232

a. Material and labor costs only.

b. Includes windmill and storage tank.

TABLE 5

PROPOSED AMP ALLOTMENTS
RANGELAND DEVELOPMENTS SCHEDULE

1 Allotment Number	2 Allotment Name	3 Thousands of Acres Poor/Fair Range Condition	4 Thousands of Acres Critical/ Severe Erosion Condition	5* Potential AUMs Divided by Initial Stocking Rate	6 Hundreds of Percent Federal Range Carrying Capacity	7 Miles of Riparian Stream Habitat	8 Thousands of Acres Crucial Deer/ Elk Habitat	9 Resource Factor Total (Sum of columns 3 through 8)	10* AMP Benefit: Cost Ratio	11* Percent Adjustment in Permitted Use	12 Range Developments	13 Units	14 Year Programmed	15 Remarks
Allotments with Grazing Systems to Begin in 1981														
0147	Matador-Blacktail	0.16	0.64	4.41	0.45	0	2.26	7.92	++	- 43	None			
0145	Lemhi Pass	0	0	5.24	0.48	0.25	0.80	6.77	+	0	None			
0107	Porcupine Canyon	0.38	0.44	1.60	0.50	3.20	0	6.12	++	0	None			
0734	Snowcrest	0	0	4.52	1.00	0	0	5.52	++	0	None			
0518	Sweetwater Basin	0.26	0	4.43	0.39	0	0	5.08	++	- 52	Spring Pipeline Stock tank	1 each 0.75 mi. 1 each	1982 1982 1982	
0385	Windy Pass	0.19	0	3.17	0.46	0.20	0.90	4.92	++	- 47	None			
0758	Dad Creek	0.37	0.06	3.42	0.73	0.10	0	4.68	++	+ 6	None			
0404	Preacher Creek	0.30	0	1.39	0.29	2.10	0.38	4.46	++	0	None			
0114	Bill Hill Creek	0.09	0.08	1.91	0.52	1.20	0.60	4.40	++	- 8	None			
0173	Gallagher Creek	0	0	2.70	0.71	0.30	0	3.71	++	- 43	None			
0315	Richards	0.72	0.64	1.38	0.92	0	0	3.66	++	- 11	None			
0168	Timber Butte	0	0	2.27	0.76	0	0	3.03	++	0	None			
0169	Saier	0	0	1.79	1.00	0	0	2.79	++	0	None			
0710	Staudenmeyer	0.37	0	1.74	0.46	0	0	2.57	++	- 5	Spring Pipeline Stock tank	1 each 1.0 mi. 1 each	1984 1984 1984	
0109	Buhler	0.17	0	1.84	0.43	0	0	2.44	++	0	None			

Allotments with Grazing Systems to Begin in 1982

1	2	3	4	5*	6	7	8	9	10*	11*	12	13	14	15
0152	Long Creek	2.45	1.69	2.68	0.74	19.75	1.80	29.11	++	0	New fence Springs Stock tanks Sagebrush burn	1.0 mi. 3 each 3 each 500 ac.	1982 1984 1984 1984	
0488	Virginia City	2.48	0	10.97	0.40	2.00	1.40	17.25	++	- 59	Cattleguard	1 each	1981	May be combined with California Creek allotment.
0507	California Creek	2.22	0.18	2.42	0.48	4.40	3.90	13.60	++	- 35	None			May be combined with Virginia City allotment.
0137	Bull-Heifer Creek	0.71	0.78	7.31	0.63	1.50	0.10	11.03	++	0	Sagebrush burn	110 ac.	1983	
0481	Brandon Pasture	0.68	0	6.22	0.73	1.10	1.70	10.43	-	- 48	Sagebrush burn	75 ac.	1983	
0745	Taylor Creek	0.93	1.15	5.81	0.48	2.00	0	10.37	+	0	Cattleguard	1 each	1982	
0129	Big Springs Gulch	0.96	0.41	1.91	0.75	0	6.00	10.03	++	0	None			
0177	Phalarope	3.71	0.36	3.09	0.66	0	0	7.82	++	0	None			
0735	Forsythe	2.46	0	1.41	0.31	3.00	0	7.18	++	- 12	None			
0740	East Clover	0.09	0	3.81	1.00	2.00	0	6.90	-	0	New fence Cattleguard	0.5 mi. 1 each	1981 1981	Survey and design initiated 1980.
0113	Red Canyon	0.05	0.21	1.71	0.81	0	0	2.78	++	- 47	None			Grazing system to be initiated simultaneously with allotment 0740 (same operator).
0501	Wisconsin Creek	0.92	0	2.74	0.80	0	2.00	6.46	++	- 15	None			Adjoins Beaverhead Nat. For.
0156	Maiden Creek	0.47	0.41	4.30	0.55	0.60	0	6.33	++	- 43	None			
0151	Lima Reservoir	2.93	0.19	2.19	0.49	0	0	5.80	++	0	New fence	2 mi.	1984	
0475	Mill Gulch	0.47	0	2.15	0.21	2.50	0.40	5.73	++	0	New fence	1.75 mi.	1981	Survey and design initiated 1980.
0510	Rattlesnake	1.12	0.49	2.06	0.62	0.50	0	4.79	++	0	None			
0702	Thomas	1.24	0	2.69	0.35	0.50	0	4.78	+	0	None			
0165	Coyote Creek	0.14	0.16	3.03	0.88	0.25	0	4.46	++	- 48	None			

1 Allotment Number	2 Allotment Name	3 Thousands of Acres Poor/Fair Range Condition	4 Thousands of Acres Critical/ Severe Erosion Condition	5* Potential AUMs Divided by Initial Stocking Rate	6 Hundreds of Percent Federal Range Carrying Capacity	7 Miles of Riparian Stream Habitat	8 Thousands of Acres Crucial Deer/ Elk Habitat	9 Resource Factor Total (Sum of columns 3 through 8)	10* AMP Benefit: Cost Ratio	11* Percent Adjustment in Permitted Use	12 Range Developments	13 Units	14 Year Programmed	15 Remarks
0316	Redfern	0.34	0	3.09	0.03	1.0	0	4.46	++	- 76	Spring Stock tank	1 each 1 each	1982 1982	Forest Service will administer.
0456	Ballard	0.19	0	2.27	0.45	1.00	0.50	4.41	++	- 28	New fence New fence Sagebrush burn	1.5 mi. 1.0 mi. 100 ac.	1981 1983 1984	Survey and design initiated 1980.
0459	Bryan	0.90	0.06	2.06	0.74	0.30	0	4.06	++	- 45	None			
0270	Lima Peaks	1.02	0.37	2.43	0.15	0	0	3.97	++	0	None			Forest Service will administer.
0453	Lower Rochester Basin	1.05	0	2.60	0.15	0	0	3.80	++	- 29	None			
0722	Smallhorn Canyon	0	0	3.00	0.68	0	0	3.68	++	- 51	None			
0313	Nelson	0	0	2.39	0.95	0.30	0	3.64	++	- 24	None			
0160	Burns Mountain	0.79	0	2.09	0.46	0	0	3.34	++	- 13	None			
0706	Wheat	0	0	2.38	0.63	0	0	3.01	++	- 76	None			
0149	Radio-TV	0	0	1.24	0.44	0	1.00	2.68	++	- 6	Cattleguard	1 each	1984	
0738	Cocanougher	0.05	0	1.82	0.42	0.20	0	2.49	-	- 61	None			
0199	Rody	0.28	0.11	1.63	0.39	0	0	2.41	++	0	None			
0102	Crystal Creek	0.09	0.04	1.63	0.60	0	0	2.36	++	0	New fence Pipeline Stock tank	0.6 mi. 0.75 mi. 1 each	1981 1982 1982	Adjoins Beaverhead NF; survey and design initiated in 1980.
0159	Shineberger	0.26	0	1.46	0.27	0	0	1.99	++	0	None			
Allotments with Grazing Systems to Begin in 1983														
0727	Roe Ranch	2.04	0.83	4.88	0.70	0	5.20	13.65	++	0	Pipeline Stock tanks Spring Reservoir	1.2 mi. 2 each 1 each 1 each	1981 1981 1982 1982	Survey and design initiated 1980.

1	2	3	4	5*	6	7	8	9	10*	11*	12	13	14	15
0727	Roe Ranch (continued)										Pipeline Stock tanks New fence	1.2 mi. 3 each 2.9 mi.	1982 1982 1982	
0311	Glendale Common	2.89	0	4.07	0.73	1.90	1.90	11.49	+	- 47	Pipeline Stock tanks New fence Cattleguards Sagebrush burn	1.25 mi. 5 each 2 mi. 2 each 1,200 ac.	1982 1982 1982 1982 1984	Stewardship area
0421	Strawberry Ridge	0.48	0	3.55	0.39	3.00	1.20	8.62	-	- 21	Springs Pipeline Stock tanks	2 each 1 mi. 2 each	1982 1982 1982	
0730	Jones-Peet	0	0.28	3.81	0.54	3.60	0	8.23	++	0	New fence	4.75 mi.	1982	Survey and design initiated 1980.
0332	Skeeters	0	0.22	5.61	0.87	0	0.70	7.40	++	0	Pipeline Stock tanks	1.5 mi. 2 each	1983 1983	Stewardship area
0345	Logan-Smith	0.87	0.40	4.43	0.75	0.50	0	6.95	++	0	Spring Stock tank Sagebrush burn	1 each 1 each 50 ac.	1982 1982 1984	
0130	South Black Canyon	0.73	0	3.92	0.30	1.75	0	6.70	++	- 64	New fence Remove fence	1.5 mi. 0.5 mi.	1982 1982	
0741	Indian Creek	1.09	0.83	1.63	0.43	2.60	0	6.58	++	- 50	New fence Spring Stock tanks	1.5 mi. 1 each 2 each	1982 1983 1983	
0120	Frenchie-Holland	0.93	0.98	2.75	0.97	0	0	5.63	-	- 32	Springs Stock tanks New fence	3 each 3 each 2.5 mi.	1982 1982 1982	
0104	Twin Lakes	0.28	0	2.45	0.07	1.50	0	4.30	++	- 69	Sagebrush burn Cattleguard	300 ac. 1 each	1982 1983	Forest Service will administer.
0138	Kent-Price Canyon	0.80	0.98	1.15	0.90	0	0.40	4.23	+	- 13	New fence Spring Stock tank	1.5 mi. 1 each 1 each	1982 1984 1984	
0447	Wallace Peak	0	0	2.10	0.26	1.80	0	4.16	+	- 43	Spring Pipeline Stock tank New fence Sagebrush burn	1 each 0.5 mi. 1 each 1.25 mi. 116 ac.	1981 1981 1981 1982 1982	Survey and design initiated 1980.
0732	Sand Dunes	0.15	0	2.81	1.00	0	0	3.96	-	- 26	New fence	1 mi.	1982	Survey and design initiated 1980.

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Allotments with Grazing Systems to Begin in 1984														
0469	Belmont	7.69	0	3.91	0.76	1.60	4.00	17.96	++	- 35	New fence	1.25 mi.	1982	
											Pipeline	4 mi.	1983	Need water right
											Stock tanks	4 each	1984	
											Sagebrush burn	230 ac.	1984	
											Sagebrush spray	1,500 ac.	1984	
0314	Garrison	7.58	3.91	3.51	0.89	0	0	15.89	-	- 56	Springs	2 each	1982	
											Stock tanks	2 each	1982	
											New fence	3.5 mi.	1983	
											Cattleguard	1 each	1984	
0699	Rio Puerco-Nicholia	1.50	1.39	2.16	0.70	2.10	7.50	15.35	++	0	Springs	2 each	1982	
											Pipeline	1.5 mi.	1982	
											Stock tanks	4 each	1982	
											New fence	3.1 mi.	1983	
											Cattleguard	1 each	1983	
											Springs	2 each	1984	
											Stock tanks	2 each	1984	
0531	Copper Mountain	1.60	0	4.22	0.43	4.50	4.00	14.75	-	- 56	New fence	0.5 mi.	1983	
0108	Hanson Creek	2.31	3.03	1.46	0.47	2.80	4.50	14.57	++	0	New fence	6.4 mi.	1983	Easement required; adjoins Beaverhead NF.
0498	Stone Creek	1.98	0	3.60	0.44	4.50	3.50	14.02	-	- 32	Springs	2 each	1982	
											Pipeline	1 mi.	1982	
											Stock tanks	5 each	1982	
											New fence	4.5 mi.	1983	Easement needed.
											Springs	3 each	1984	
											Stock tanks	3 each	1984	
											Sagebrush burn	100 ac.	1984	
0348	Georgia Gulch	1.18	0	5.16	0.80	2.20	3.40	12.74	+	- 31	Spring	1 each	1982	
											Pipeline	0.1 mi.	1982	
											Stock tank	1 each	1982	
											New fence	4 mi.	1983	
											Cattleguard	1 each	1983	

1	2	3	4	5*	6	7	8	9	10*	11*	12	13	14	15
0533	Timber Creek	3.32	0	1.66	0.83	4.50	2.30	12.61	+	- 33	Springs Stock tanks New fence Sagebrush burn	2 each 2 each 1.5 mi. 165 ac.	1982 1982 1983 1984	
0490	Barton Gulch	0.41	0	3.35	0.26	5.40	2.00	11.42	++	- 19	None			Adjoins Beaverhead National Forest.
0101	Little Divide	1.29	0.11	5.10	0.70	3.00	0	10.20	++	0	Spring Stock tanks New fence Cattleguards	1 each 2 each 3.4 mi. 2 each	1983 1983 1983 1983	Adjoins Beaverhead National Forest.
0312	Maiden Rock	0	0.86	4.67	0.51	4.0	0	10.04	+	0	New fence	0.25 mi.	1983	
0482	North Fork	0.25	0.05	3.47	1.00	1.6	3.60	9.97	++	0	Pipeline Stock tanks	1.5 mi. 2 each	1983 1983	Water right needed
0136	Knox	1.13	1.25	2.85	0.54	0.75	3.20	9.72	++	- 18	New fence	1.5 mi.	1983	New system
0497	Davey Creek	0.91	0.01	1.45	0.67	2.2	3.8	9.04	++	- 6	Springs Stock tanks New fence Cattleguards Sagebrush burn	4 each 4 each 2.25 mi. 2 each 200 ac.	1982 1982 1983 1983 1984	
0526	Dry Lakes	1.62	0	2.87	0.12	1.60	2.80	9.01	++	- 40	New fence	0.5 mi.	1983	
0172	Ruby-Dell	0.37	0	4.25	0.53	1.20	2.20	8.55	++	0	New fence	4 mi.	1983	
0327	Devil's Dancehall	1.20	0.82	6.09	0.30	0	0	8.41	++	- 56	Pipeline Stock tanks Plow, seed	1.25 mi. 2 each 100 ac.	1983 1983 1984	Easement needed.
0522	Wall Creek	0.14	0	2.59	0.44	3.60	0.70	7.47	-	0	New fence Cattleguards Pipeline Stock tanks	4 mi. 2 each 4 mi. 4 each	1982 1983 1983 1983	Survey and design initiated in 1980. Easement needed
0192	Shoshone Cove	1.20	0.45	2.33	0.69	0	2.80	7.47	-	0	Well Pipeline Stock tanks	1 each 3 mi. 3 each	1982 1983 1983	
0193	Williams-Bell Canyon	1.65	1.39	1.23	0.64	0	2.40	7.31	+	- 6	Well Pipeline Stock tanks New fence Cattleguard	1 each 5 mi. 8 each 4.8 mi. 1 each	1982 1983 1983 1983 1983	Survey and design initiated in 1980. Easement needed Easement needed.
0122	Taylor Creek-Buffalo Creek	0.52	1.82	2.35	0.96	0.20	0.30	6.15	+	- 29	Well Pipeline Stock tanks	1 each 2.3 mi. 4 each	1982 1983 1983	Survey and design initiated in 1980

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0428	Fletcher-Moore	1.66	0	2.16	0.16	0.60	1.40	5.98	+	- 30	New fence Well Pipeline Stock tanks	2.5 mi. 1 each 0.75 mi. 2 each	1982 1982 1983 1983	Survey and design initiated 1980
0521	Virginia City Hill	1.90	0	3.34	0.31	0	0.30	5.85	-	- 55	Pipeline Stock tanks New fence Sagebrush burn	5 mi. 5 each 1.25 mi. 250 ac.	1983 1983 1984 1984	Water right and easement needed
0703	Wolfe	0.49	0.03	1.21	0.77	0	2.00	4.50	+	- 10	Well New fence Pipeline Stock tank	1 each 1 mi. 0.25 mi. 1 each	1982 1982 1983 1983	Survey and design initiated 1980; new well will also provide water for allotment 0714.
0714	Wellborn-Dell	0.31	0.08	1.94	0.90	0	2.50	5.73	++	0	Pipeline Stock tank	0.5 mi. 1 each	1983 1983	Survey and design initiated 1980.
0407	Revenue Common	0.99	0	1.76	0.49	0.70	1.75	5.69	++	- 19	Spring Stock tank Spring Stock tanks New fence Pipeline Stock tanks	1 each 1 each 1 each 2 each 0.75 mi. 1.9 mi. 2 each	1981 1981 1982 1982 1982 1983 1983	Survey and design initiated 1980.
0342	Limekiln	0.27	0	4.24	0.76	0	0	5.27	++	- 50	Sagebrush burn	150 ac.	1984	Stewardship area
0119	Pass Creek	0.44	0	1.23	0.90	2.60	0	5.17	++	- 4	New fence	2 mi.	1983	Adjoins Beaverhead NF.
0179	Peet Rock	0.91	0	2.73	0.44	1.00	0	5.08	++	- 55	New fence	0.5 mi.	1983	
0443	Kountz	0.12	0.01	2.94	.41	0.20	1.20	4.88	-	0	Spring Pipeline Stock tank New fence	1 each 0.1 mi. 1 each 0.75 mi.	1982 1982 1982 1983	
0322	Lost Creek	0.37	0	2.21	0.50	0.3	1.00	4.38	++	- 52	None			Stewardship area

1	2	3	4	5*	6	7	8	9	10*	11*	12	13	14	15
0341	Deno Creek	0	0.39	2.52	1.00	0	0	3.91	++	- 49	None			Stewardship area
0171	Henneberry Ridge	0.28	0.10	1.93	0.98	0	0.60	3.89	-	0	Well Pipeline Stock tanks	1 each 0.1 mi. 2 each	1983 1983 1983	
0489	Benchmark	0.91	0	2.62	0.11	0	0.04	3.68	++	- 50	Spring Pipeline Stock tank New fence Sagebrush burn	1 each 0.4 mi. 1 each 1.5 mi. 300 ac.	1982 1982 1982 1983 1984	
0351	Alder Creek	0.13	0	1.52	0.90	1.10	0	3.65	-	- 17	New fence	2 mi.	1984	Stewardship area
0708	Fish Creek	0.12	0	1.59	0.62	1.00	0	3.33	++	0	New fence Well Pipeline Stock tanks	7 mi. 1 each 2 mi. 3 each	1982 1983 1983 1983	Easement needed; survey and design initiated 1980
0720	Whitworth	0	0.50	1.74	0.88	0	0	3.12	++	- 5	Spring Stock tank Well Stock tank	1 each 1 each 1 each 1 each	1981 1981 1982 1982	Survey and design initiated 1980
0377	Sparrow Ditch	0	0	1.86	1.00	0	0.20	3.06	++	0	New fence	0.8 mi.	1983	
Allotments with Grazing Systems to Begin in 1985														
0148	Rocky Hills	4.20	5.39	2.32	0.66	5.75	11.10	29.42	++	- 14	Wells Stock tanks Spring Stock tank Cattleguards Sagebrush burn Pipeline Stock tanks New fence	2 each 2 each 1 each 1 each 5 each 530 ac. 7.5 mi. 12 each 4 mi.	1982 1982 1983 1983 1983 1983 1984 1984 1984	Easement needed Easement needed
0748	Medicine Lodge	6.08	2.46	2.12	0.78	1.50	5.70	18.64	++	0	New fence	10 mi.	1984	Adjoins Beaverhead NF.
0328	Birch Creek-Willow Creek	2.27	4.12	4.38	0.82	2.50	2.50	16.59	-	0	Spring Pipeline Stock tanks New fence	1 each 1 mi. 2 each 1.5 mi.	1983 1984 1984 1984	Stewardship area
0323	McCartney Mountain	12.54	0	2.39	0.57	0	0	15.50	++	- 25	Pipeline Stock tanks Springs Stock tanks New fence	1 mi. 2 each 6 each 12 each 9 mi.	1983 1983 1984 1984 1984	Easement needed

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0269	Four Eyes	0.30	2.77	2.61	0.75	2.70	6.30	15.43	+	0	Well Stock tank New fence Cattleguards	1 each 1 each 0.5 mi. 2 each	1982 1982 1984 1984	
0479	Garden Creek	3.61	0	3.73	0.57	3.90	1.50	13.31	++	- 39	Springs Pipeline Stock tanks New fence Sagebrush burn	7 each 0.8 mi. 7 each 5.5 mi. 900 ac.	1983 1983 1983 1984 1984	
0320	Cherry Creek-Brown Creek	2.04	1.15	4.46	0.93	2.70	1.50	12.78	-	0	Spring Pipeline Stock tank Cattleguards	1 each 0.1 mi. 1 each 2 each	1984 1984 1984 1984	Stewardship area
0499	Idaho-Jack	1.03	0	2.90	0.64	1.30	6.90	12.77	-	- 40	New fence Cattleguard	1.5 mi. 1 each	1983 1984	
0124	Cedar Creek	3.28	1.97	2.92	0.82	0	2.80	11.79	-	- 44	Well Pipeline Stock tanks Sagebrush burn	1 each 3.7 mi. 6 each 700 ac.	1983 1984 1984 1984	
0354	Seyler Pasture	2.82	2.12	1.37	0.84	2.80	0	9.95	++	0	Spring Stock tanks Pipeline Stock tank New fence Sagebrush burn	1 each 2 each 0.5 mi. 1 each 2.25 mi. 25 ac.	1982 1982 1983 1983 1984 1984	
0725	Horse Prairie Livestock	0.32	1.95	2.57	0.46	1.70	2.70	9.70	+	- 52	Remove fence Springs Stock tanks Cattleguard	0.5 mi. 4 each 4 each 1 each	1982 1984 1984 1984	Easement needed
0485	Axolotl Lakes	1.34	0	3.86	0.97	3.30	0	9.47	-	- 51	New fence Spring Pipeline Stock tanks	7.5 mi. 1 each 0.5 mi. 2 each	1983 1984 1984 1984	
0302	Bradley	0.81	0.81	6.42	0.92	0	0	8.96	-	- 71	Sagebrush spray	300 ac.	1984	Stewardship area

1	2	3	4	5*	6	7	8	9	10*	11*	12	13	14	15
0110	Pipe Organ Rock	0	0	4.26	0.72	0	2.00	6.98	++	0	Spring Stock tank Well Pipeline Stock tanks	1 each 1 each 1 each 1.25 mi. 3 each	1981 1981 1983 1984 1984	
0236	Dry Boulder	0.15	0	4.52	0.01	1.00	1.30	6.98	+	- 24	New fence Cattleguard Sagebrush burn	1 mi. 1 each 52 ac.	1984 1984 1984	Adjoins Deerlodge National Forest.
0468	Granite Creek	1.21	0	3.20	0.68	0.10	1.70	6.89	-	- 66	Spring Pipeline Stock tanks	1 each 1 mi. 2 each	1983 1984 1984	
0337	Seven Springs-Big Hole	2.61	0	3.55	0.69	0	0	6.85	-	- 43	New fence	1.5 mi.	1984	Stewardship area
0305	Burk-Rieber	1.22	0.31	3.75	0.87	0	0.60	6.75	-	- 52	Pipeline Stock tank Cattleguard	0.5 mi. 1 each 1 each	1983 1983 1984	Stewardship area
0319	Gneiting	0.34	0.82	2.01	0.94	0	2.30	6.41	++	0	Spring Stock tank Pipeline Stock tanks New fence	1 each 1 each 1.75 mi. 3 each 1 mi.	1982 1982 1983 1983 1984	
0530	McHessor Creek	0.44	0	2.82	0.59	2.50	0	6.35	+	- 51	Springs Stock tanks New fence	2 each 2 each 1.5 mi.	1983 1983 1984	Easement needed
0347	Twin Adams	0.05	0.05	3.82	0.62	0.30	1.50	6.34	++	0	Pipeline Stock tank	0.5 mi. 1 each	1984 1984	Stewardship area
0326	Tungsten Mill	0.59	0	3.34	0.62	0	1.50	6.05	++	0	Spring Pipeline Stock tank New fence	1 each 0.5 mi. 1 each 2.25 mi.	1983 1984 1984 1984	Stewardship area Easement needed
0753	Bannock Pass	0.28	0	4.71	0.93	0	0	5.92	+	- 38	Spring Stock tank	1 each 1 each	1984 1984	
0516	Spring Brook	2.51	0.25	1.89	0.41	0	0.70	5.76	++	- 36	New fence Wells Pipeline Stock tanks	1 mi. 2 each 2.5 mi. 5 each	1982 1983 1984 1984	Survey and design initiated 1980
0343	Quartz Hill	0	0.59	4.18	0.98	0	0	5.75	++	- 29	Pipeline Stock tank New fence Sagebrush burn	0.25 mi. 1 each 0.25 mi. 70 ac.	1983 1983 1984 1984	Stewardship area

1 Allotment Number	2 Allotment Name	3 Thousands of Acres Poor/Fair Range Condition	4 Thousands of Acres Critical/ Severe Erosion Condition	5* Potential AUMs Divided by Initial Stocking Rate	6 Hundreds of Percent Federal Range Carrying Capacity	7 Miles of Riparian Stream Habitat	8 Thousands of Acres Crucial Deer/ Elk Habitat	9 Resource Factor Total (Sum of columns 3 through 8	10* AMP Benefit: Cost Ratio	11* Percent Adjustment in Permitted Use	12 Range Developments	13 Units	14 Year Programmed	15 Remarks
0143	Mayberry	2.86	0.19	1.54	0.61	0	0.50	5.70	++	0	Springs	2 each	1982	Survey and design
											Stock tanks	4 each	1982	initiated 1980
											Well	1 each	1983	
											Pipeline	3 mi.	1984	
											Stock tanks	5 each	1984	
0197	Bell Ranch	0.77	1.48	1.90	0.83	0	0.20	5.18	+	0	Springs	4 each	1983	
											Stock tanks	8 each	1983	
											Pipeline	2 mi.	1984	Easement needed
											Stock tanks	10 each	1984	
0158	Simpson Creek	0.74	0.03	1.58	0.80	2.00	0	5.15	+	0	New fence	1 mi.	1984	Extensive consultation needed
0486	Hogback	0.87	0	3.20	0.57	0	0	4.64	++	0	New fence	2 mi.	1984	
0126	Ellis Peak	0.59	1.10	1.73	0.71	0.20	0	4.33	-	- 47	Wells	2 each	1983	Adjoins Beaverhead NF.
											Stock tanks	2 each	1983	
											New fence	2 mi.	1984	
0525	Middle Fork	0.08	0	1.51	0.36	2.10	0	4.05	++	0	Springs	2 each	1983	
											Pipeline	0.5 mi.	1983	
											Stock tanks	4 each	1983	
											New fence	0.5 mi.	1984	
0182	Kennison Springs	0	0.06	2.35	0.50	0	0.90	3.81	-	0	Spring	1 each	1984	Easement needed
											Pipeline	1.5 mi.	1984	Easement needed
											Stock tanks	4 each	1984	Stewardship area
											New fence	1 mi.	1984	Easement needed
0123	Huntsman	0	0	2.39	0.74	0	0.30	3.43	++	0	Springs	2 each	1982	Survey and design
											Stock tanks	2 each	1982	initiated 1980
											Well	1 each	1983	
											Pipeline	1.2 mi.	1984	
											Stock tanks	3 each	1984	
0131	Frying Pan	1.16	0.28	1.66	0.28	0	0	3.38	+	- 21	Springs	2 each	1983	Easement needed
											Stock tanks	3 each	1983	
											Well	1 each	1984	
											Pipeline	3.25 mi.	1984	Easement needed
											Stock tanks	4 each	1984	
											New fence	4 mi.	1984	
											Plow, seed	400 ac.	1984	

1	2	3	4	5*	6	7	8	9	10*	11*	12	13	14	15
0433	Shaw Basin	0.09	0	2.46	0.29	0	0.50	3.34	++	0	New fence	1 mi.	1984	
0512	Rock Creek	0.80	0	1.89	0.63	0	0	3.32	+	- 25	Pipeline Stock tanks	5.5 mi. 7 each	1984 1984	
0135	Big Hole Road	0.23	0	2.31	0.41	0	0	2.95	-	0	Well New fence Pipeline Stock tanks	1 each 1.5 mi. 3 mi. 6 each	1983 1983 1984 1984	 Easement needed Easement needed
0161	Buzztail	0	0.06	2.25	0.45	0	0	2.76	++	0	Pipeline Stock tank New fence	1 mi. 1 each 1.25 mi.	1984 1984 1984	
0118	Antelope Butte	0	0.60	1.70	0.30	0	0	2.60	-	0	Pipeline Stock tank	0.5 mi. 1 each	1984 1984	

*NOTE: Column 5 represents the 25-year potential of the allotment (based on soils and climate) to produce forage in excess of the initial stocking rate. Column 10 indicates benefit:cost ratios as follows: "++" = B:C ratios of more than 1.99; "+" = B:C ratios of more than 0.99 but less than or equal to 1.99; and "-" = B:C ratios of 0.99 or less. Column 11 represents the proposed initial sotcking level adjustment as a percentage of current permitted use.

TABLE 6

PROPOSED AMP ALLOTMENTS
RANGELAND DEVELOPMENTS SUMMARY

Type Of Development	Unit of Measure	Unit Cost[a] (1980 Dollars)	Units Programmed				Total Program	
			1981	1982	1983	1984	Units	Costs
New fence	Mile	$2,500.00	4.35	37.4	57.25	58.25	157.25	$ 393,125.00
Remove fence	Mile	600.00	0	1.0	0	0	1.0	600.00
Cattleguards	Each	2,400.00	2	3	15	10	30	72,000.00
Springs	Each	1,800.00	4	33	23	24	84	151,200.00
Reservoir	Each	2,500.00	0	1	0	0	1	2,500.00
Wells[b]	Each	27,200.00	0	9	11	1	21	571,200.00
Pipeline	Mile	5,280.00	1.7	8.05	38.25	39.5	87.6	462,528.00
Stock tanks	Each	225.00	6	52	79	107	244	54,900.00
Plow, seed	Acre	15.00	0	0	0	500	500	7,500.00
Sagebrush burn	Acre	2.50	0	416	715	4,992	6,123	15,307.50
Sagebrush spray	Acre	8.00	0	0	0	1,800	1,800	14,400.00
Alter fence	Mile	320.00	3	73.5	73.6	73.6	223.7	71,584.00
Total Cost								$1,816,844.50

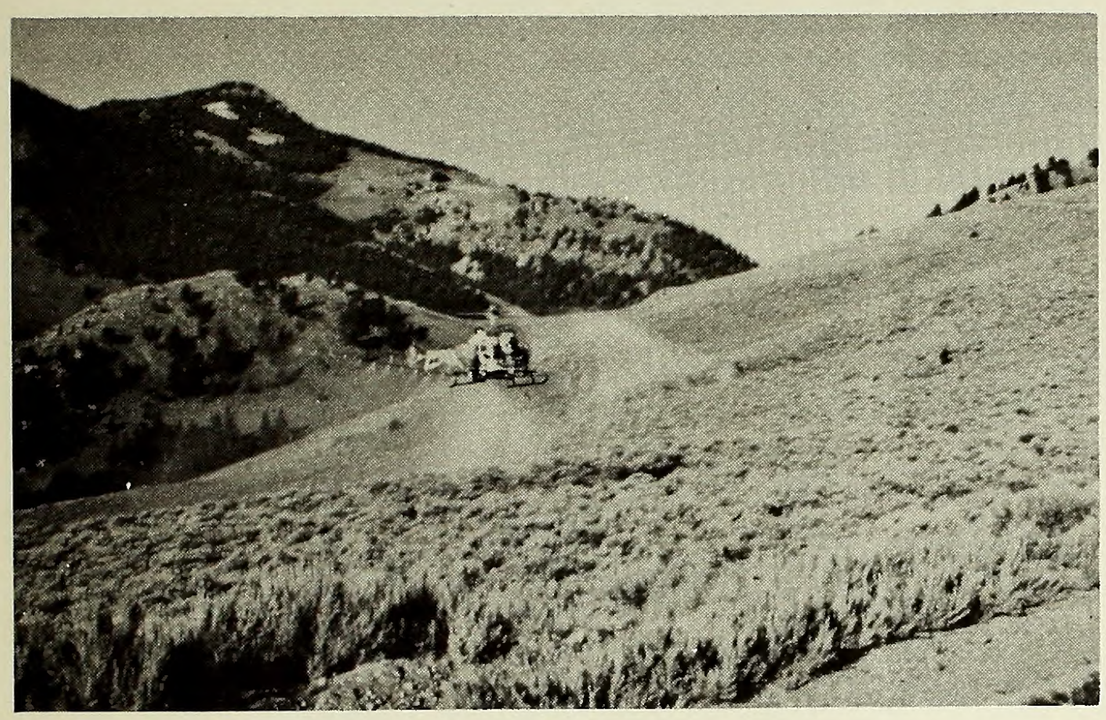
a. Material and labor costs only.

b. Includes windmill and storage tank.

Interdisciplinary Review

An interdisciplinary team including a wildlife biologist and a soil scientist will review projects prior to construction. All vegetation manipulation projects will be reviewed by BLM specialists, the Montana Department of Fish, Wildlife, and Parks, and other concerned agencies and individuals. A site-specific project plan will be prepared on each proposal following this review.

Grazing of treated areas will not be permitted until desirable species of vegetation become firmly established. This will require rest during at least one, and possibly two or more, growing seasons, depending on specific climatic and soil conditions.



Sagebrush Spraying

Proposed fence projects will be further evaluated to determine whether they would affect crucial wildlife habitat, impede wildlife movement, or result in the loss of open space or other aesthetic values. The benefits of water developments in improving livestock distribution will be carefully weighed against the effects such developments could have on important wildlife habitat. When conflicts are identified through interdisciplinary review, alternative methods for meeting the resource objectives in the AMP will be investigated.

The interdisciplinary review may establish that some proposed projects need to be modified or omitted, or that additional developments not discussed in the EIS are needed. These changes could occur because additional resource problems or needs may be identified during the site-specific analysis, because an AMP is found to need revision, or because more economical or efficient methods have been discovered.

GRAZING USE ADJUSTMENTS

The selected program calls for reductions in livestock use on 251 allotments, increases on 114 allotments, and no change in 153 allotments, for an initial livestock use level of 110,033 AUMs. (The total of 518 includes 52 unallotted areas.) This represents an overall reduction of 12 percent. Proposed grazing systems and livestock use levels may need to be adjusted before AMPs are finalized, because some AMPs were written as long ago as 1976. New resource information gathered by ongoing studies also could indicate a need for modification of AMPs.

Consultation with livestock operators before final decisions are issued will determine whether reductions need to be phased in over a five-year period to alleviate identified economic hardships or whether the entire reduction can be made in the first year.

After final decisions have been issued, livestock use levels will be reviewed and evaluated periodically on the basis of information collected in the studies program. These future evaluations may reveal a need for further modification of the grazing management systems and/or authorized livestock use on some AMPs.

APPROPRIATIONS

Availability of personnel and funds is critical for timely implementation of the planned rangeland management program. The allotment-specific implementation schedule outlined in the EIS could be affected either by a lack of project development funds or by lack of additional personnel to lay out the project work, administer construction contracts, and supervise and monitor the AMPs. If the needed funds are not appropriated as expected, the program will be implemented over a longer period as funding allows.

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